

AMERICAN VETERINARY REVIEW,

FEBRUARY, 1892.

EDITORIAL.

ARMY VETERINARIANS.—For some reason there seems to have been a lull in the agitation of the question of reform in respect to the position and rank of veterinarians in the United States army, a matter which at one time appeared to be likely to excite much interest in veterinary circles. In fact, since the last report of the committee appointed by the United States Veterinary Medical Association, which seemed to promise some good results, nothing has recently been heard on the subject. The matter has not, however, been forgotten, nor is all hope to be abandoned, especially in view of the great encouragement derived from the officers of the War Department, to whom the subject has been presented, and who seem inclined to entertain rational views of the case. The reform is too necessary, and involves too much of beneficial change, not alone to veterinarians, but as affecting the proper and efficient administration of the details of the service, to be ignored, and though it may cost a large expenditure of time and patience to secure it, the success of the effort is sure to be realized in the end.

We have received the following communication from a committee of army veterinarians, engaged in this effort to promote their guild, and it is with great pleasure that we lay it before our readers, and bespeak their active co-operation with the committee in compassing the desired object.

EFFORTS OF A COMMITTEE OF ARMY VETERINARIANS TO BETTER THE CONDITION
(THROUGH LEGISLATION) OF THE MEMBERS OF THE PROFESSION IN THE
SERVICE.

The frequent failure of those attempting to better the condition of the army veterinarian through the national legislature had almost discouraged us from any further efforts in this direction until the thought occurred to us, that if a thing was worth having it was worth fighting for again and again, and that the harder the fight—when success crowned the effort—the greater the glory. Having taken this for a text, a correspondence was started between the veterinarians in the service, asking each other what it was best to do in the premises. As a result of this correspondence, the following bill, which originated with Dr. M. J. Treacy, M.R.C.V.S., Veterinarian 8th U. S. Cavalry, was submitted to each veterinarian in the service, asking for his suggestions as to changes, etc., in its provisions. The bill, as it appears below, met with the approval of all, with one exception, this exception being from John Tempany (an empiric), who at present fills the position of senior veterinarian in the 9th U. S. Cavalry; his objection was that if the bill became a law it would give him a rank he did not like, and, although the bill increased his wages \$25.00 per month, still it deprived him of fuel and light amounting to about \$4.00 per month.

The following is the bill:

A BILL TO FIX THE PAY AND ALLOWANCES OF THE VETERINARIANS OF THE ARMY
OF THE UNITED STATES.

Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled:

SECTION 1. That the pay of the Veterinarians of the Army of the United States shall be One Hundred and Twenty-five Dollars (\$125.00) per month with all the allowances of a Second Lieutenant of Cavalry.

§ 2. That the number of Veterinarians in the Army of the United States shall not exceed two (2) for each regiment of Cavalry.

§ 3. That hereafter all appointments as Veterinarians in the Army of the United States shall be confined to graduates of recognized Veterinary Colleges of the United States, and candidates for such appointments shall be citizens of the United States, and shall be required to pass such examination as the Secretary of War shall direct.

§ 4. That all veterinarians—employed as such—in the Army of the United States at the passage of this act shall be immediately reappointed without examination under the provisions of this Act.

§ 5. This Act to take effect immediately.

When it was ascertained that the bill met with universal approval—with above exception—a subscription of not less than \$3.00, and not to exceed \$5.00, was requested from each member in the service. The response was prompt, each individual enclosing \$5.00, with the exceptions of Tempany, 9th; Service, 10th, and Waugh, 3rd Cavalry (the latter gentleman, however, while not wishing to subscribe at this stage, promised to pay the committee a full month's salary, the first he received under the new system, if bill became a law), this subscription

to be used to defray expenses of a trip to Washington by one of the committee, with the object in view of securing the endorsement of the War Department before bill was introduced in Congress. One of the committee made the journey to Washington, armed with a letter of introduction to one of the powers that be, through the kindness of Dr. John Robertson, 2d U. S. Cavalry. The bill in its present shape received the hearty endorsement of Major-General Schofield and Adjutant-General Kelton, on November 24th, 1891, each of them promising to give it his hearty support, and giving permission to use his name in this connection. The result of this trip was promptly reported to all, and a scheme for future efforts proposed and accepted, with the usual objection from Tempamy of the 9th only. At this stage Dr. Treacy of the 8th had bill introduced twice in the Senate (the numbers are S 89, Senator Collum, and S 885, Senator Kyle) and twice in the House; the numbers in latter body will be given later on. It was now thought advisable that a member of the committee should visit Washington and appear before the committees of both Houses on Army Affairs to plead our cause and state the necessity for the change. The necessary funds for this purpose being lacking, the committee was undecided what steps to take (it not being considered advisable to ask our members for further subscriptions) when again Dr. Treacy asserted himself with a check for \$175.00, to be used as thought advisable by the committee in defraying expenses in this matter. Simultaneously with the subscription from Dr. Treacy came one each from Dr. Turner, 6th, and Dr. Robertson, 2nd Cavalry.

A member of the committee is now in Washington in the interest of the bill, and it is anticipated by all—bearing in mind the promises of support and favorable endorsements we have had from different sources—that the bill will become a law. While the committee appreciates the efforts of the U. S. Veterinary Medical Association in this direction, and while it returns its sincere thanks to that body for its work in behalf of the army veterinarian, still it cannot but deplore the fact that not a single army representative was appointed on its committee on army legislation last year, although there are four army veterinarians members of the Association and the members of the service were probably as good judges of what they required in the way of legislation as absolute outsiders, still (although this movement of the army veterinarians is an independent one) we would request the Committee of the Association to interest itself in the passage of our bill. It has been asserted by members of the profession that army veterinary legislation would never be successful as long as the majority of army veterinarians were non-graduates. In reply to this statement we would say that there are only two non-graduates in the service, the remainder being representatives of the foremost veterinary colleges in Canada, England and the United States; the authorities have long recognized the fact that something should be done to better the condition of the army veterinarian, and in the present movement the veterinary force is a unit—with the one objection quoted—and have the approval and promised support of the war authorities. In conclusion the committee takes this opportunity of thanking the members in the service for their hearty co-operation, and to assure them that a strict account of all monies received and expended will be forthcoming in due time; it also thanks the REVIEW for its many vigorous efforts in behalf of the army service and

requests a continuation of these services; it would ask Drs. Treacy, Robinson, Corcoran and Turner to accept its thanks for past favors and trusts that they will still continue to interest themselves in the present movement. Trusting our efforts may meet with success, we remain

Yours sincerely,

THE COMMITTEE.

January 15th, 1892.

N.B.—The committee has recently received numerous inquiries in reference to another bill lately introduced and bearing on the subject. We beg to say that the bill is unworthy of serious notice, and only serves to show the calibre of its originator.

MAINE *vs.* MASSACHUSETTS.—A measure of a very radical character connected with sanitary medicine has just been adopted by the State of Maine, which is, we think, destined to have a most important bearing upon the history of veterinary sanitary science in the United States, in relation to securing and maintaining the control of tuberculous cattle.

This measure is nothing less than the establishment of a quarantine against all cattle sought to be imported into that State from Massachusetts.

According to the circular which we have received, the motive of this stringent measure is derived from the fact of the wide prevalence of tuberculosis in Massachusetts, a condition which, although ignored by a few, has, we believe, been acknowledged by many of the veterinarians of that State. Our correspondent and friend, Dr. G. Bailey, who is State Veterinarian, has worked the subject with great energy, and it is no doubt due to his efforts, through the serious statistics which he has labored to collect and array as proofs of his case, that the outcome, in this notice of quarantine, is to be attributed.

Whether this quarantine can be enforced or not, our knowledge of inter-State rights and policy is too limited to qualify us to judge; but we cannot repress our doubts of the efficacy of such a measure in diminishing or abolishing the existence of tuberculosis.

But there is one fact which cannot in any case be ignored, to wit, that to veterinary scientific zeal and public spirit is due the inauguration of the *first official action* looking to the limitation and ultimate extirpation of the scourge in question

—for to a veterinarian belongs the honor of sounding the first bugle note of war against this fearful disease, accounted by so many to be the principal source of contagion and death amongst the cattle-herds of the country.

And now that the Bureau of Animal Industry in Washington has nearly completed its work on pleuro-pneumonia, why will it not turn its attention next to tuberculosis, and thus strike another mighty blow in behalf of the widespread and almost universal interests whose wealth is now in such constant danger of destruction.

The notice of quarantine issued by the Cattle Commissioners of Maine reads as follows:

TO WHOM IT MAY CONCERN.

Public notice is hereby given, that in consequence of the prevalence of tuberculosis among Massachusetts cattle, as disclosed by the official reports of their authorities, supplemented by post-mortems held in Maine of cattle purchased in that State for dairying and breeding purposes, the Cattle Commissioners of the State of Maine believe that the public health of its citizens and the welfare of this commonwealth demand that a rigid quarantine (against all cows whether in milk or dry, and all bulls for breeding purposes) be maintained on and after January 1st, 1892, until further notice, and all such cattle entering the State of Maine thereafter will be subject to quarantine at the owner's expense; provided, however, that the above regulations shall not apply to western cattle coming through Massachusetts into Maine for the purpose of slaughter.

The attention of all persons is directed to Sections 2, 3, 4, 5 and 7, of chapter 188, of the Public Laws of Maine, 1887, applying to cattle affected with contagious diseases, and which will hereafter be rigidly enforced.

(Signed)

THOMAS DAGGET, President.

F. O. BEAL, Treasurer.

GEO. H. BAILEY, State Veterinary Surgeon.

A quarantine station will be provided, near Morrills Corner, Deering, where all cattle brought into Maine in violation of the above notice will be kept until discharged, at the expense of the owner or owners; and particular attention is called to the full reprint of the law relating to contagious diseases upon the following pages of this circular-letter, which will be rigidly enforced after this date.

Portland, January 1st, 1892.

PLEURO-PNEUMONIA.—Referring to the work of the Bureau of Animal Industry in relation to pleuro-pneumonia, it is quite certain that that disease can be considered as almost eradicated from the United States. If there are yet a few

small districts in New York and New Jersey, where diseased animals are occasionally found, it is in nearly every instance a sporadic and isolated case; there is no danger of any extensive outbreaks. Our colleagues of the force are on the watch, and every new case is rapidly disposed of. The result of this vigilance and energy means a complete extirpation of the malady at a very early date, if, indeed, the work has not been already finished.

The Report of the Secretary of Agriculture, issued October 27, 1891, contains some interesting statements. They read as follows:

ERADICATION OF PLEURO-PNEUMONIA.

At the time of my last report contagious pleuro-pneumonia existed in two districts in the United States, viz.: on Long Island, State of New York, and in the county of Hudson, State of New Jersey. During the present calendar year but four herds have been found infected with this disease on Long Island, the last herd having been discovered and slaughtered on April 30, 1891. Six months have therefore elapsed since the finding of any cases of the disease in this district, and I am satisfied that our efforts there in extirpating contagious pleuro-pneumonia have proved successful.

There still remains a small district in the State of New Jersey from which the infection has not been completely eradicated. The work there, however, is being pressed forward with the greatest possible energy, and I confidently expect that before the end of the present fiscal year I shall be able to announce the complete eradication of this virulent and destructive disease from the United States.

With only one small district infected, with this territory in strict quarantine, and with all herds promptly slaughtered when disease is discovered, there is no longer justification for any restriction whatever by the government of any country against the importation of cattle from this country.

STILL ANOTHER VETERINARY COLLEGE.—The announcement is just out of the opening of another new veterinary college, this time at Des Moines, Iowa. The trustees are O. H. Shoemaker, President; F. W. Loomis, M.D., Secretary, and S. A. Campbell, D.V.S., Treasurer and Registrar.

There are some new features in the faculty, W. C. Conelly, LL.B. being Professor of Veterinary Jurisprudence, and F. W. Loomis, M.D., Professor of Hygiene, Breeding and General Management of Domestic Animals. The application for matriculation is also new, being as follows: Any intending student, desirous to enter the October session, must send his

application to the Dean previous to the opening of the session. On the receipt of this and the forwarding of the matriculation fee of \$5.00, the candidate will receive a ticket which will authorize him to present himself for admission.

The course is of two years, and the fees are for the first year \$120 and for the second year \$135.

All students are required to enroll themselves as members of the Veterinary Medical Association. On fulfilling its requirements, and graduating, students receive the diploma of honorary fellowship of this Association.

While we cannot see the need nor justification for the establishment of a *second* veterinary college in the state of Iowa, we extend our wishes to the new undertaking. S.

AND YET ANOTHER.—The news has reached us indirectly that the University of Nebraska is about to organize and establish a high school of veterinary medicine. Perhaps it is only in embryo at present, but from the interest which the officers of that great institution have shown of late in the progress of comparative medicine, it may be easily inferred that the day is not far distant which will witness the opening of the school. When we reflect upon the subject, however, and in a retrospect of only sixteen years recall the time when veterinary education was represented by just *one school in the entire United States*, and looking about us now we can behold them springing up in all directions, we cannot but feel a little apprehensive concerning the results which may follow such rapid proliferation. Whither are we tending? Where shall we stop? Even with the progress that veterinary science is yearly making, where shall we find the men to teach, unless we expect them to "take turns" and teach one another? Have our veterinary schools already turned out a sufficient number of thoroughly educated alumni to fill the chairs as accomplished scientists, willing to sacrifice what the requirements of the teacher impose? Can we not emphatically say that a great danger threatens veterinary education, veterinary standing and the status of the whole veterinary profession, if the schools of to-day are to look to the graduates of yesterday to occupy the necessary positions in their

boards of faculty—student to-day, professor to-morrow? More schools may be wanted; they are in fact needed, but more important elements are also needed. Are we at present prepared to furnish them? Are they in existence? If so where shall we find them, and in whose personality are they embodied? These are important questions to answer.

TO OUR READERS.—The increased size of the REVIEW for last month, and of the present issue, furnish visible evidence of our desire to fully perform our duty to our readers, and to appreciate practically the kindness of our correspondents. This change is intended for a permanence, and it is our design, moreover, to increase at an early day the number of our pages in order to enlarge our facilities by making room for all the favors of our correspondents. For the present, however, we must again offer the old excuse, lack of space, if some of the communications we have received do not turn up in the present number. They will appear in our next.

ORIGINAL ARTICLES.

PARTURIENT APOPLEXY.

By DR. J. E. BROWN, V.S., Oskaloosa, Iowa.

(A Paper read before the Iowa State Veterinary Medical Association.)

As my experience with this disease has been a little less satisfactory than with any other; as it is one on which eminent practitioners squarely antagonize each other; as it is one of the many diseases of which the veterinary profession positively knows but little of its true etiology, pathology or successful therapeutics; and as the average man usually writes best on the subject he knows the least about, I thought it well for me, on this occasion, to tackle parturient apoplexy.

I have studied the text books on this subject, and packed my "grip" accordingly, until I thought I was equipped both in knowledge, medical agents and surgical outfit to successfully combat any case of parturient apoplexy, but, somehow on my return from this sort of professional visits, I generally

came back with my store of knowledge and stock of medicines exhausted ; my expectations not exactly realized ; my faith in text-book teachings diminished, and a realization of the fact that even our wise predecessors who could write great volumes of veterinary literature were capable of being mistaken. And now, while I have nothing to offer that I can give proof of being superior to the text-book instructions, I have discovered the necessity of dropping away from these theoretical teachings to a certain degree and making some practical investigations, and I hope from this paper, from the discussions which will follow, and from the united efforts of the profession in making the investigations, that at no distant day, instead of each one of us having a little pet theory of our own, we may stand united, not only upon this, but all other subjects of such vital importance to the profession and general public ; that we may know what parturient apoplexy is, what causes it, and what line of treatment is best calculated to antagonize its fatal effects.

In my experience with the disease I have been particularly impressed with the similarity of symptoms as manifested in parturient apoplexy and many cases of true gastric impaction, and, as you will discover, the purpose of my paper is to show that parturient apoplexy has its origin in gastric derangement.

Just what there is within the system at time of parturition, just before or just after, to predispose the disease or aggravate certain symptoms as are usually most noticeable at that time, but often seen at other times during attacks of acute indigestion, I am not fully prepared to say, but I do believe that if the digestive system could be kept in perfect running order, there would be no such disease known as parturient apoplexy. Among the predisposing causes offered by different authors are "Stimulating food allowed in great abundance," "Access to rich green pastures," "Plethoric condition of the body," and Williams, in *Principles and Practice of Veterinary Medicine*, p. 329: "It should be remembered that prior to the act of parturition, deep milking cows which are dry or nearly so, rapidly become plethoric ; hence in finding an animal of this kind great care should be taken that the food be not over abundant, too highly nitrogenous or too watery."

Such cases as are here referred to are usually in the very highest state of physical condition, with an appetite craving food of whatever nature, to the full limit of the capacity of the stomach. The organ becomes weakened from its over-taxation, and with the revolution of the system at time of parturition comes the crisis.

However, plethora is not a constant condition. I now call to mind at least three cases which were in low flesh, and of these three cases, two were fatal, and from this it will be seen that non-plethora neither exempts a subject from an attack nor lessens its fatality.

On the other hand, out of a large number of cases most subject to an attack, by virtue of condition (plethora), age, value as milkers, season of year, &c., not only in my own practice, but in that of others with whom I have had correspondence or conversation on the subject, I have as yet failed to hear of a single attack follow where the subject had been given a light cathartic, followed by careful attention to the dietary a few days before and after parturition. Prof. Williams says, "Parturient apoplexy rarely occurs prior to the third period of parturition," but gives two instances succeeding the second calving. I might inform the professor that under favorable conditions it might occur after the first, for I saw a case of that kind. A young Jersey that gave birth to her first calf in the afternoon, during the night got to the meal box, and of its contents ate all she desired, and during the next forenoon developed a typical case of parturient apoplexy.

The sympathy existing between brain and stomach; the affection of one from the disordered condition of the other in all animals and especially in the bovine tribe, is too well known and often observed by all members of our profession to need special comment here, and if we can have all the symptoms of parturient apoplexy in a case of gastric impaction six months after parturition, and it is my experience that we do, it seems to me we may associate the two diseases very closely together. In proof that we do have well developed symptoms of parturient apoplexy six months after parturition, I

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will refer to notes on two or three cases which have come under my notice.

The first subject was a grade Durham, six or seven years old, in good flesh and in the sixth month of gestation. I found her lying on the ground; would occasionally make an unsuccessful effort to get up, but had no power in the hind legs; part of the time would lie out full length on the ground and part of the time up in a natural position, with head thrown around to side, and pay little or no attention to her surroundings. The owner told me that when she came in from the pasture in the evening he noticed her stagger from side to side with her hind parts; seemed nervous and gave no milk; that during the night went down and in the morning was as I found her. The abdomen was somewhat distended, and the unmistakable indigestion *grunt* told the story. The next case was a grade Jersey in fair condition for the time of year, (January). Had been giving milk some months and was a good milker. The owner said he had changed the feed a few days before from timothy and clover mixed, to wild hay, of which she seemed at first very fond, but that on this day she had suddenly failed in her milk and would not eat. The bowels were constipated, rumen filled with solids, head elevated and eyes staring. Was on her feet, but was weak and almost fell down when we attempted to drench her; also manifested decided difficulty in swallowing. By morning my patient was down, head thrown to the side, comatose and eyes amaurotic; bowels remained inactive and case died in the evening. A third case, a full blood Jersey, was taken from pasture to our county fair ground for exhibition and put on strictly dry feed; the bowels became inactive, stomach impacted and when I first saw her, was down, full length on the ground, and exhibiting every symptom of parturient apoplexy, although she had been fresh several weeks. Here now are three, and I can recall several more similar cases of parturient apoplexy side-tracked and several months delayed.

Every practitioner will recall many cases where, when treating cattle for indigestion, the stomach was in such an irritable condition that the administration of a dose of salts or

other nauseating medicines was followed by increased uneasiness and manifestation of gastric irritation and nausea, and that these symptoms do *not* follow the administration of the same dose where the stomach is not thus affected; and again that such symptoms generally follow the administration of such medicine in cases of parturient apoplexy, and patients became rapidly worse, and the constant returning of the fluids from the stomach into the throat, while the animal is lying flat, produce fatal strangulation, more often than when taking the medicines in the first place, if they be carefully administered while the head is elevated and the body propped up. No more is the loss of the power of deglutition a symptom of parturient apoplexy than it is a symptom of the impactions, for in either case there is more or less paralysis of the entire alimentary tract.

True, if we ascribe indigestion as the cause of all these cases the question naturally arises why are all the cases occurring at this period accompanied with so much derangement of the nervous system, or why are not these complications a more constant symptom at other times? It must be admitted that at this time, in the history of all animal existence, there is something within the system which predisposes, or aids to a derangement of the nervous system.

The theory of "*nervous shock*," weakening the brain and rendering the organ an easy prey to disease, is certainly upset by the fact that the disease rarely if ever occurs after a prolonged or difficult labor, in which the nervous system would be for a considerable time greatly taxed, but, on the other hand, follows easy and perfectly normal deliveries. Neither can we favor the theory of non-diversion of the blood from the foetus before birth to the mammary glands after birth, "rushing to the brains," for, in many instances to my personal knowledge, there has been quite an abundant flow of milk, which would suddenly cease as the other symptoms made their appearance. Prof. Williams says, "When the symptoms of the malady are not manifested for some time after the birth of the calf, it will generally be found that the secretion of the mammary gland has been in an average or

even abundant quantity." Why then, after the blood has already found its proper distribution and the organs taken on their natural functions, should the process suddenly cease. In the light of a cause of the disease the cessation of milk secretion cannot be accepted, but simply taken as the *result* of a disease. It is well known that in all cases of indigestion the milk secretions are suddenly stopped.

Just what idea is intended to be conveyed by the term "parturient apoplexy" is not clear, at least is indefinite. The term apoplexy is generally used to signify a cerebral apoplexy—a congestion of the brain. Dunglinson defines "apoplexy"—"every effusion of blood which occurs suddenly into the substance of any organ or tissue," but farther speaks of "embolic apoplexy," or "apoplectiform cerebral embolism," which I think generally meets our cases, and describes it as "resulting from the plugging up of the cerebral vessels with emboli—an anæmic condition of the brain thus resulting from insufficient blood supply."

In the cases which I have examined—post-mortem—while there may have been more or less congestion of the meninges, such was not the condition of the brain tissues, but clots, emboli, were invariably present; and I shall here introduce the theory that the blood of the animal at this time is in such a condition as to especially favor the formation of thrombi, which condition, being associated with the gastric affection and sympathetic cerebral complications, combine in one common cause to produce a disease for which, for want of a better name, I must accept the term parturient apoplexy. It is said that in the human female the fibrine, or constituents thereof, is decreased during the first six months of pregnancy, the average being 2.3, while in the last three months it is increased to 4, and as the fibrine results from the metamorphosis of the albumen of the blood and other tissues, and that the blood of the fœtus is the great store-house of nutrition, as well as the receptacle of all waste products—the latter being transferred to the blood of the mother through the placenta, and that with the functional development and growth of other organs the placenta becomes of less consequence and a fatty degen-

eration or tissue metamorphosis begins, fitting it for being cast off at time of parturition, it must necessarily be that the blood at this time contains a very great amount of fibrine and effete material, thus predisposing to congestions, thrombi, etc.

Two or three cases, to which I will call your attention, certainly died from the effects of blood clots in the vessels. A full blood Shorthorn had delivered her sixth calf some eighteen hours before the attack. On arrival I found the cow down, unable to get up; in high condition and a strong milker; had given a good flow of milk the evening before. After twenty-four to thirty hours the bowels responded to the action of a cathartic which we had given; the urine was voided naturally and all seemed to be progressing favorably. On the third day the cow got on to her feet, walked about the stable lot after her calf and I discontinued my visits. On the fourth day she was turned into the house lot, picked a little grass, and as the owner afterward informed me, *seemed* to be all right. He left her then for about an hour and on returning found her dead. He said he had made an examination of the internal organs as best he could and found nothing that seemed to him abnormal except the liver, which was enlarged and contained a great quantity of clotted blood, and seemed to be almost in a state of decomposition.

Another case, very similiar, only that she lay in a perfectly comatose condition for about thirty-six hours, then got on to her feet, bowels moved quite naturally, and apparently improved rapidly from twelve to fourteen hours, when an unfavorable change was noticed, and death occurred in less than thirty minutes. No autopsy was made.

The next case was a very large, fat cow that had been highly fed on a nutritious diet with the view of having her in good condition for calving and milking. Gave birth to her fifth or sixth calf in the morning, and symptoms of the disease were noticed at noon. I arrived shortly after and found her unable to get upon her feet; prescribed salts and gamboge, and kept down accompanying tympanitis with spr. ammon. and ether. By the next morning this case got up

and walked to the stable and stood up most of the day ; laid down at night and got up again in the morning ; ate a little mash and drank some water, and except for an inactive condition of the bowels seemed to be doing well until just before noon, when she suddenly sank down and died in a few minutes. These deaths I believe were due to thrombi.

As will be seen, I may define my idea of the pathology and etiology of parturient apoplexy as a cessation of the functions of the digestive organs and a venous or arterial obstruction of the cerebral or other blood vessels by thrombi or embolism, and due to injudicious dietary and the pathological condition of the blood (excess of fibrine) peculiar to this period.

This may not be very elegantly or scientifically "*put*" but comes pretty near to expressing the idea I wish to convey. In studying the symptoms I have quoted largely from our text books, commented from personal observation, and compared them with those of gastric impactions. "The secretion of milk is stopped, the cow hangs its head, ceases to feed, and paddles with its hind feet." And Prof. Williams in his "Practice of Medicine," page 327, says, "By-and-by the breathing becomes hard and rapid ; it sways from side to side ; the hind legs double at the fetlock and at last it falls." "The ears, horns and forehead are now intensely hot, the animal lies in a state of perfect stupor or coma, or dashes itself violently about ; the head is thrown from side to side, and there is danger of the horns being knocked off."

Now I think we will not find "rapid breathing" a symptom of any form of brain disease, but that it is slow and heavy, with deep inspirations, and this is as we see it in the later stages of the disease ; but in the early stages, when the stomach is the principal seat of trouble, the breathing is accelerated, as it is so apt to be in indigestions. Again, in many cases I have sought in vain for any perceptible increase of heat about the head. I do not consider that at all a constant symptom, but that it is misleading in symptomatology and pathology, for I am quite sure that much of the seeming delirium is a result rather of intense abdominal pain than of any brain affection.

"In some cases the nose rests firmly upon the ground, and if the head is lifted up falls back like some lifeless body; at other times the head is brought back to the side, where it remains pressed against the shoulder or neck. There is often a disposition to lie upon the side with the neck and limbs extended, the eyes glassy and the mouth open; tympanitis sets in and the cow will die in a very short time. The cow may remain in this condition for some hours, providing it is made to lie, by packing, in the natural position on the sternum, evincing but few signs of life except the act of breathing, which is generally stertorous. Now and then there is emitted a gurgling sound of gas and fluid regurgitated from the rumen. In some instances the symptoms of delirium are very violent; the animal struggles violently, dashes its head about, bellows, groans and strains violently; very shortly the abdomen becomes tympanitic, and the breathing more labored and difficult. There are eructations of foetid gases from the rumen, and death supervenes. In some instances the bowels may be relaxed in the earlier stages; this is, however, soon succeeded by non-excretion, either of fæces or urine."

Now I must say if I were called upon to write up the symptomatology of acute indigestion I think I could do but little better than copy the above. So far as I have seen, all authors, in both human and veterinary medical literature, describe the pulse as quick and weak in cerebral apoplexy, whilst in parturient apoplexy it is universally agreed among practitioners that the pulse is slow and weak. As the delirium comes on and the animal struggles about, or with difficulty keeps upon her feet, the pulse is somewhat quickened by the increased exertion, but as she sinks into coma the pulse falls in number of beats and in violence and force, gradually becoming less and less perceptible until death.

There is certainly no other disease upon which the line of treatment has been so diversified. One man treats it with powerful cathartics, another with stimulants, another by venesection and sedatives, and so it goes, but basing our line of treatment upon our theory of cause and effect, we see

two conditions to overcome, namely, the indigestion and abnormal condition of the blood; and to accomplish this we are dependent upon a free action of all the excretory organs.

Sulphate of magnesia, the most commonly prescribed bovine purgative, probably meets the requirements in this disease better than any other medicinal agent we have, for it not only unloads the bowels and overcomes the indigestion, but also, while in the blood, retards coagulation and removes fibrine. The mode of medicinal administration to obtain the best results becomes a matter of consideration, owing to the irritable condition of the stomach in many instances, as has already been referred to, and the nauseating effect of the medicine. I would disapprove of giving a sufficient dose at one time to produce purgation, such doses being calculated to aggravate rather than subdue the urgent symptoms, while doses of six or eight ounces, with full doses of sodii hyposulphite—which also serves a two-fold purpose of counteracting acidity of the stomach or arresting fermentation, and exerting alterative action in the blood—may be given and repeated every one or two hours until four or five doses have been taken. If tympanitis be present I should endeavor to overcome the condition by the use of ammonia, ether, tr. of ginger, or other antacids and stomachics, and if unable to control it in this way the trochar and canula must be used. As there is gradual sinking of all the vital powers I think stimulants are indicated; perhaps moderate doses of belladonna to stimulate the heart's action is as good as we could do.

Great care must be exercised in administering the medicine, lest the animal, whose power of deglutition is likely to be impaired, be not strangled, and when such condition is present all medicines should be given with an injection pump, a short piece of rubber hose, or even a male catheter, if nothing better be at hand, introduced down the throat after the patient is propped up on the sternum. The medicines poured through will pass readily into the stomach. Every precaution must be taken to keep the patient propped up on the sternum, for if allowed to lie out flat the fluids are apt to

be regurgitated into the throat and produce strangulation, or find their way into the trachea and lungs. If an animal be attacked in an open field in hot weather, good shade must be at once provided. The catheter should be frequently used if the urine is not naturally voided. External applications, I think, are of little use other than keeping the body warmly clothed. If consciousness return and the bowels respond to the action of the cathartic, nux vomica may be given with the hyposulphite of sodii, which I think should be persevered in from start to finish of the disease. Immediately upon the return of consciousness there is often an unnatural appetite, and the animal will devour great quantities of almost any kind of food. This must be carefully guarded against, as a fatal relapse would be sure to follow. A very restricted diet of easily digested food is positively requisite to success the first few days.

So far as is possible I would advise educating owners to use preventive treatment on all cases likely to become affected, as preventive treatment is much more satisfactory than curative.

ALCOHOLIC SOLUTION OF $Hg. Cl_2$. IN TREATMENT OF FISTULOUS TRACTS.

By J. McBIRNEY, D.V.M., Charles City, Iowa.

(A Paper read before the Iowa State Veterinary Medical Association.)

In dealing with this subject I may present nothing new ; but so far as I am personally concerned, it has proven or seemed to have proven a great boon in the treatment of those most troublesome of ailments affecting the equine race.

Various and numerous are the modes and methods recorded and advocated for treatment of the above, but also as numerous are the futile efforts to effect successful recoveries.

Below, I will quote to you the history of six cases, their treatment and results, which, without question, is the most efficient proof of the virtue of any remedy or treatment.

Should what I offer prove a benefit to any, or aid in the least in the treatment of these troubles, I will feel more than repaid and that my efforts have been not entirely in vain.

CASE 1.—In January, 1891, my attention was called to a well developed poll-evil in a bay mare, fifteen years old, in fair condition, weight about ten hundred pounds, and used for driving purposes.

For several weeks there had been a free discharge from either side. The openings were enlarged with the bistoury and this was all the case called for in the way of operating.

After evacuating the cavity of pus with carbolized water, a solution of alcohol and bichloride (ten grains of the latter to the ounce of the former) was injected and retained in cavity for twenty-four hours by pledgets of absorbent cotton. At the expiration of that time they were removed and the wound dressed antiseptically. This solution was injected twice afterwards, at intervals of from two to three days, the pledgets not being used. The case recovered in six weeks with no other attention than injecting every second and sometimes every third day, one of the following: a weak solution of potassium permanganate, zinc sulphate, or a watery solution of iodine and pot. iodide. Externally the parts were kept well cleansed and lubricated with carb. cosmoline.

I took particular care to guard against flushing or washing out the sore with water, none being employed except that in the solutions and that used on the first day of treatment. No after-complications arose and the animal has been in good condition since.

CASE 2—Fistulous withers in a black mare. The animal was in good health, of medium weight and had been used for farm purposes.

August 1st.—I made free incisions and used nitrate of silver solution in the cavity. The owner took the mare home, a distance of six miles, and for seven weeks treated with white lotion and copper sulphate in solution. The animal was brought to me again and examination proved results unsatisfactory.

At this time, Sept. 26th, the incision had nearly closed, but

still large enough to admit the nozzle of a fair sized syringe. Did not use the knife this time. Injected the alcohol solution the same day, and the two following days hydrogen peroxide. Used the alcohol solution again on the 29th, and followed daily with the hydrogen peroxide. October 7th the case had recovered.

CASE 3—Poll-evil in gray mare, four years old and weighing nearly twelve hundred pounds. Laid open on each side and evacuated of pus, followed by a ten per cent. solution of pepsin injected and retained by means of closing wounds with cotton. The animal being five miles from town, I gave instructions for removal of cotton next day and daily treatment with white lotion.

Five weeks later I saw the patient and found results very unsatisfactory.

I requested that the animal be brought to town, which was done some eight or ten days later, when I again tried the pepsin solution, injecting several times during a period of two weeks with same result; then commenced treating with the bichloride solution. This was injected daily for five days; at the expiration of that time healthy granulations were apparently set up. Hydrogen peroxide was alternated with white lotion daily at first, and later every second, and still later every third day.

During the last two weeks zinc ointment was applied externally.

Seven weeks from the date of using the alcohol solution the patient had successfully recovered.

CASE 4.—Fistulous sore in roan horse, of twelve weeks duration; a result of injury inflicted by some sharp-pointed instrument, which penetrated the tissues inward and downward immediately beneath, or inferior to, the wing of the atlas. The direction of the wound prevented the free exit of pus, and to this fact I ascribed the cause of the formation of the pus-secreting walls composing the fistula.

For two weeks I used hydrogen peroxide with little encouragement; then used alcohol solution four times and followed with the peroxide. The last week zinc sulphate was

substituted for the peroxide. On the twenty-second day the sore was entirely healed.

CASE 5.—Fistulous withers in bay gelding, fifteen years old, weighing about ten hundred pounds, and in a somewhat emaciated condition from a severe attack of distemper. September 24th, laid open on either side, and after clearing of pus (a very large amount being present), injected the ten per cent. solution of pepsin, which was retained for twenty-four hours, then washed out with a one per cent. solution of hydrochloric acid. Treated antiseptically until October 9th, when I began the use of the alcohol solution, not being satisfied with results. This I used five times at varying intervals, following up with hydrogen peroxide and zinc sulphate solution. The case has not yet quite recovered. The progress in this case proved more tardy than any of the others, owing, no doubt, to the condition of the animal, and also to the fact that the case was not under my immediate supervision. On inquiry, I found that the patient, on more than one occasion, received no attention whatever for several days.

CASE 6.—Fistulous sore on left shoulder of roan gelding, located immediately behind posterior border and opposite lower part of middle third of scapula. This occurred as a result of a seton inserted in part about a year previous. With scalpel I enlarged opening and used alcoholic solution on October 23rd and again on 27th. Dressed daily with a weak solution of zinc sulphate. On the eighth day the sore was entirely healed.

Of the above six cases only one failed to respond to a reasonable period of treatment, but this one was debilitated from disease and the animal's systemic condition antagonistic to the success of any treatment. In reality, this patient would not be a proper subject upon which to give a fair test of any therapeutic agent. I believe if the animal had been in the same state of health the others were, that the treatment would have been equally satisfactory.

From close observations during the treatment of these cases, and still wider observations in its more extended use, the following conclusions may justly be drawn: First, that it

is a very active agent and possesses much virtue in destroying the pyogenic membranes or pus-secreting walls; second, that it is also very active in setting up healthy granulations, which is no minor factor in this class of troubles; third, where the use of this agent is exclusively followed up with hydrogen peroxide, not neglecting the external cleansing and lubricating, quicker and better results are obtained.

PNEUMONITIS.

By F. H. P. EDWARDS, Iowa City, Iowa.

(A paper read before the Iowa State Veterinary Medical Association.)

In defining the disease of the lungs known as pneumonitis, we would say that it was an inflammation of the entire lung substance, either general or local, with the cause still a matter of dispute. This may seem somewhat unsatisfactory, but with existing knowledge of the subject we cannot make our definition otherwise.

Taking up the subject in a scientific order, we would first come to causation.

Causes may be divided into two classes, viz., predisposing and exciting. Under the predisposing may be enumerated—exposure to cold, ill-ventilated stables, debility, dampness, etc. The exciting causes—traumatism, inhalation of noxious vapors, introduction of foreign bodies through the trachea into the lungs, and last, though not least, the direct action of a germ which may, for the sake of convenience, as well as serving to disguise our ignorance, be denominated the pneumococcus.

Now, although we do not know positively that pneumonitis is caused by a germ, still we have some very eminent observers who claim such to be the case, and who claim to have demonstrated the germ spoken of above. Inasmuch as we have no other tenable theory to adhere to, and until it is demonstrated to the contrary, I prefer to believe that pneumonitis is specific in its nature, and that it can only result from the direct action of the specific germ.

The animal is noticed to be drowsy and cold, and refuses to eat, although it drinks freely and frequently. There may be a distinct rigor, and this is followed very frequently by a high fever, with all the characteristics which that term engenders. The animal refuses to lie down, and moves slowly and in an apathetic manner around its stall, occasionally taking a mouthful of food without seeming to relish it. The animal's general appearance is indicative of the feverish condition he is in.

Physical examination shows the temperature ranges from 102° to 106° F., or even higher; pulse full, bounding and running from 60 to 80 per minute; respiration, while not much impaired in the early stage, is vastly increased and in direct ratio to the lung area affected in the later stages. Percussion shows slight dullness in the beginning, then well marked dullness, followed by absolute flatness. Auscultation is the most valuable of all the means at our command. During the first stages we have loss of normal vesicular murmurs; this is due to the congestion of the lungs, and if the disease be not checked we can soon detect the presence of rales. Rales are of several different kinds, and are produced by air passing through and between surfaces which are prone to stick together. We say that if the case be seen early enough we will get sub-crepitant rales; if later on, the rales will be crepitant. As the lungs become pretty well filled up with the inflammatory exudate, the rales disappear altogether. With these symptoms present, we will be safe in saying we have a case of pneumonia on hand.

The prognosis will depend to a great extent upon the time in which we see the animal, and to the surroundings. If we see the case early enough and the surrounding conditions are of a favorable nature, we may say that the prognosis is favorable, at least, comparatively speaking.

The successful management of pneumonitis is a problem that occupies to-day as prominent a position for scientific consideration and solution as it did years ago, notwithstanding our present superior knowledge of its morbid anatomy and the recent advances in general medical skill; and, indeed,

medical thought is so varied and confused as to its proper treatment that it may be justly regarded as chaotic.

This disease is still a reproach to our art, and there is no subject which deserves more earnest study. In company with others, I find that in pneumonitis, after exudation and consolidation have taken place, I am nearly, if not quite, powerless to modify the course of the disease under any treatment now in vogue. This deplorable fact was very forcibly impressed on me some time ago by the loss from heart failure of several patients in quick succession.

I cannot present anything very new in this paper, nor can I express the confidence that the line of treatment I have chosen to consider and elucidate will be successful in a large percentage of the cases that are now regarded as necessarily fatal; but I hope by drawing renewed attention between the pathological condition present and the physiological action of the drugs administered to throw more light upon the general plan of symptomatic treatment that is now adopted by the majority of the profession.

Some authors state that pneumonitis in the first stages can be aborted by large doses of quinine, sufficiently large to cause cinchonism. Whilst this is within the bounds of possibility, I have never yet had the good fortune to cause the abortion of the disease; not from the want of using quinine in large enough doses, but probably from not seeing the case early enough, and experience has taught me that in our patients this mode of treatment is very detrimental to both patient and practitioner.

In the first stages of an uncomplicated case of pneumonitis the indications are clear: 1. Control the circulation and diminish the determination of blood to the lungs. 2. Reduce the temperature if high. 3. Allay pain by both physical and physiological rest. 4. Support the vital powers.

On being called to a case in the first stages, I first find the most suitable place to house my patient; if obtainable, a box stall or double stall with a window facing the south; blanket the animal; hand rub and bandage the extremities, and give a dose of aconite conjoined with oleum lini Oi and bicarb.

sodæ. Aconite lessens the contraction of the heart, chiefly through its influence upon the vagus centre, increases the action of the skin and kidneys and depresses the functional activity of the spinal cord and peripheral nerve endings, effects which serve to recommend it above other circulatory sedatives. If the movements of the heart can be kept at the normal standard, nature may be depended upon to do the rest, so far as the circulation is concerned. Due attention should be paid to the condition of the alimentary tract, which is sometimes seriously disturbed by reflex influences; and although we were taught at school that purgatives in this disease were never tolerated by the bowels, I have never yet seen any bad results follow oleum lini in the dose mentioned; on the contrary, I have seen great benefit derived from its use, not only by securing free evacuation of the bowels, but by switching the blood, so to speak, from the already congested lungs to the bowels. I also leave, to be given three times a day, two-drachm doses of acetanilid to reduce temperature. Order animal to be kept quiet, but not isolated, as animals, like ourselves, in sickness like sympathy and company.

The above measures in the usual run of uncomplicated cases will answer for the first stage; aconite to quiet the circulation; oleum lini to renovate the digestive track; acetanilid to reduce temperature and maintain the action of the aconite. Cold applications to sides in the form of sponging, ice bags, wet cloths, etc., have recently been lauded by several veterinarians in this country. My own practical knowledge of these measures in this disease is limited, but as far as it goes it is confirmatory of their safety and usefulness; my only objections being that quite often the patient objects to it, and it also requires the personal attention of the veterinarian or a trusty assistant—things which are quite often not easily secured; I can readily see the great harm that might arise if this method of treatment were left in the hands of the average stable boy or hired man, such as we see in our every-day practice.

Exposing the surface of the body to cool or cold air is not

without considerable antipyretic effect, and is unattended by any risk, although from prevalent ideas it seems hazardous in the minds of most people.

The axiom that patients with fever do not take cold is one which it is extremely desirable should become popularized.

Popular apprehension on this score often stands in the way of proper ventilation in cases of disease. During the stage of red hepatization an entire change in treatment becomes necessary; this stage is indicated by a weak and rapid pulse, congestion of liver and jaundice, diarrhœa, increased temperature, profuse sweatings, albuminaria, and in severe cases threatening symptoms of a failing circulation.

Now, circulatory depressants are strongly contra-indicated. The treatment of this stage has reference to the promotion of resolution, palliation of symptoms and supporting the powers of the system. Blisters, in my opinion, are not advisable on account of the general disturbance which they are apt to occasion, and their interference with physical examinations of the chest. If pain and soreness continue in this stage, I have had best success with a stimulating liniment, such as spirits camphor, followed up by dry heat, such as stove lids, placed in a sack and fastened on by a surcingle; they will often give immediate relief and will retain heat for a considerable time, the main objection being their weight. In this stage also, an occasional hypnotic is of great benefit, as the poor animal has persistently stood up for probably four or five days or more and has never known sleep. Opium, in my hands, has proved the most sure hypnotic. I have frequently been agreeably surprised on visiting my patient next morning to observe a noticeable diminution of the frequency of the pulse and of the respirations, and a condition of comfort, following full doses of opium. The objection to the use of opium is its action on the secretion of the bowels, as in this stage we quite often have spontaneous diarrhœa. The objection is justly overcome by the great benefit to the patient in other respects. A high temperature in this, as in the first stage, call for antipyretic treatment.

To support the powers of life is the leading general indi-

cation in the second stage. Resolution will be sure to begin and continue if the life of the patient be sufficiently prolonged. At this stage, gentlemen, it is a case of "to be or not to be," and, alas, quite often in my experience it is "not to be"; the disease quite often running on into the suppurative and gangrenous stage, despite my every effort to avert it. Occasionally I am more fortunate, and my supporting treatment consists of tonics, stimulants and nutritious foods. Of tonics I prefer quinine in small doses and gradually increased. I also got aromatic spirits ammonia to stimulate heart and promote liquefaction of the exudate. I give whiskey or alcohol to stimulate liver and sustain vital forces, which act as an active diffusible food, which is quickly taken up by the tissues and appropriated for the purpose of reconstruction and physiological change.

Whenever a question arises in the management of a case, whether alcoholics are advisable or not, it should be borne in mind that to begin earlier than they are required is far preferable to subsequent delay; for, with proper care, they can be suspended without any injury having been done, whereas the time lost by beginning too late cannot be regained.

Alimentation is an essential part of the supporting treatment, and the patient should be encouraged to take nutritious food during the whole course of the disease. Soft nutritious foods are undoubtedly best, but I have often seen patients, especially the cow and horse, refuse everything but corn, and I always encourage them to eat it, as I think the taste and desires of the patient can be trusted in this respect. Where the patient refuses all food, I think great benefits arise from the injection per rectum of small quantities of gruel, milk, etc. As well as the medicinal treatment, the local treatment should never be lost sight of, such as warm foot-baths, enemas of warm water, hand rubbing and bandaging extremities.

In conclusion, I would say that nursing and not dosing is the common-sense treatment of pneumonitis.

PURULENT METRITIS.

BY DR. O. J. LANIGAN, Winona, Ill.

(A Paper read before the Illinois State Veterinary Association.)

The case which I have to report to you is one that I have encountered in my practice.

In April, 1890, I was called to the country to deliver a mare of a foal. On my arrival at the farm I found, on inquiry, that the owner of the mare and a farm hand had been at work on the mare some four hours, they evidently wishing to practice some themselves before calling any assistance. On examination, I found the foal in the proper position, excepting left elbow, which was retaining it. On pressing the foal back and drawing on limb it was an easy matter for her to foal, which she did with a little assistance, the foal being dead. On account of the rough usage she had received the vagina was very much swollen and painful, but otherwise the mare was in good condition. After using an antiseptic wash and giving the mare proper attention, I suggested to the owner that I should call the following day, as the mare would need medical care, but was informed that he could care for her himself.

I heard nothing of the mare until August, when I was told she was not doing well, and that she was discharging per vagina.

In February, 1891, the mare was brought to my hospital by her owner. He informed me that, after having her foal, she had always discharged more or less, and he had worked her during spring work, but as she was getting worse he brought her to me. She presented a very poor appearance, terribly emaciated, eye dull, temperature 102° F, pulse 55, did not care to eat, abdomen enormously distended, and discharging per vaginam a dark colored, offensive smelling fluid.

On examination per vaginam, about one inch anterior to meatus urinarius I found the walls of vagina adherent; and that anterior to adhesion the vagina was filled with pus; also,

that there was a sinus through the adhesion, although I was unable to find it.

I at once decided to try and break down adhesion. After due preparation with antiseptics, I took an 8-inch seton needle, and passing right hand into vagina, with left hand passed needle, directing its course with right, and as carefully as possible broke through the adhesion, which was about half inch in length. On withdrawing the needle, pus followed quickly; forcing index finger into opening made with the needle, I enlarged the opening so that I passed the whole hand, when, on withdrawing my hand, an enormous quantity of pus followed. The mare began to strain violently, and with every strain forced pus from behind her, pus of a darkish cast and terribly offensive, driving my assistant and others out of the barn.

As soon as the mare stopped straining, I again passed my hand into vagina; the broken adhesions left a jagged surface, which I dressed down with curved scissors. The os uteri and uterus I found more relaxed than any case I have seen immediately after foaling. The mare now began to show signs of pain. I at once prepared an antiseptic and thoroughly irrigated uterus, dressed the wound that I had made by placing a pledget of antiseptic cotton in the vagina, gave the mare a stimulant, clothed her warmly, and turned her into a box stall, where she at once lay down, and I then had hot rugs applied to her loins.

The next morning she could not rise, and refused to eat; temperature 104° F.; pulse 60. Gave stimulant of tr. mur. iron, quinine sulph., with antiseptic washing of uterus and dressing to wound; also hot rugs continuously to loins. From second to sixth day no material change, only that she would occasionally eat a little with coaxing; nursed her as carefully as possible, and placed a careful man with her night and day.

On the sixth day appeared much better, and with a little assistance got on her feet, but very weak, and could with difficulty move her hind limbs. She now, for the first time, ate a mash and some hay and appeared bright. After a

thorough hand rubbing to limbs she moved around stall, though with difficulty. I now discontinued the use of all medicines excepting fl. ex. hydrastis, and gave a soft diet. From this time on her recovery was rapid, and in one month from time of operation she left my hospital cured. She is now in fine condition and again in foal.

INFLUENZA.

By MATTHEW WILSON, M.M.C.V.S., Mendota, Ills.

(A Paper read before the Illinois State Veterinary Association.)

Influenza is a disease that has long been known to medical science, both human and veterinary. Its history can be traced back with certainty only to the beginning of the sixteenth century, although as far back as the year 1300 we have accounts of an epidemic among the horses of Italy that seems to-day to be recognized as influenza.

With the beginning of the sixteenth century we have accounts of epidemics the wide distribution of which have been reached by no other acute infectious diseases.

Up to the present time a great number of epidemics have been described, which generally extended over whole countries and frequently over several quarters of the globe.

They returned at indefinite periods and affected every season and latitude, advancing as a rule in a great wave.

In some cases they appeared to be preceded by sporadic cases, but more commonly a large number of the animals would be affected simultaneously, the disease spreading with great rapidity.

Among the numerous outbreaks the following are recorded:

In 1648 an epizootic of this disease appeared in Germany and from there rapidly spread to other parts of Europe, and in 1711 it attacked the horses of the European armies, causing great losses.

In 1732 the disease appeared in London and later on in the same century in Scotland.

In 1766 we have the first attacks on the horses of America,

and not making its appearance here in anything like a virulent form until we have the extensive outbreaks of 1870-71, when it spread over the entire country.

It is to-day an almost permanent disease among the horses of our large cities, where bad ventilation and want of sanitary arrangements about the great majority of stables seem to keep the disease alive and perhaps predispose fresh animals to it.

Influenza is a specific febrile disease, dependent upon a specific blood poison and prevailing as a epizootic.

It is essentially characterized by a catarrh of the respiratory and generally also of the digestive organs, by great and rapidly developed weakness, pains in the head and limbs, as well as by serious nervous symptoms and fever of greater or less intensity.

It is confounded generally with simple catarrh, but is distinguished by its wide diffusion, its rapid spread and the number of cases in the regions in which it occurs.

We cannot lay its cause to atmospheric influences, as we have it occurring at all times of the year, during different climatic changes, and in countries whose atmospheric surroundings are totally different.

We have it occurring at seasons of the year when climatic changes are such as do not produce catarrh, and aside from this we have those lesions of function, peculiar to influenza, that can in no way be connected with a simple catarrh.

When we think of the numerous opportunities presented by this disease for investigation, and to what extent literature has been written upon it, we are surprised at what few facts have been gathered together concerning its cause and origin.

A great many theories have been advanced as to the etiology of influenza, such as that of atmospheric influence; others give it a specific origin, but have never been able to isolate and demonstrate its specific cause; while on the other hand there are those who claim it has a spontaneity of origin, due to want of sanitation. This last is, I think, the weakest of all, as we have it occurring when sanitary arrangements are the best, as well as where they are almost entirely wanting.

The theory of its specific origin is, I think, conceded by the majority to be the correct one, although we have as yet been unable to produce conclusive evidence.

It is due to a *living miasm*, capable of being carried onward by the air but having an independent existence of its own, and which would find in certain places conditions more favorable for its development than in others.

Take, for example, the last outbreak of influenza in the human family, which seemed to have been developed in Russia and spread in the direction of human intercourse and the prevailing winds from the east to the west.

This living miasm is capable of transmission through the air, of being carried by human beings or, in fact, by any of the known modes of infection.

Influenza has been described as the sum of a series of catarrhal manifestations, which have developed under common epidemic influences, and the intimate association of the various local affections allows us to give them a common specific origin.

Many acute local affections, such as acute catarrh, laryngitis, etc., present very much the same symptoms locally, as in this disease, but there is wanting the sudden and general seizure, the severe nervous depression, and the extent to which the mucous membranes are involved. All these seem in favor of a general cause which has a specific effect upon the whole body.

These symptoms are much more severe than in the local affections, while they remind us more of analagous symptoms in other acute infectious diseases, and for these reasons I think we are justified in classing it under the same group.

There is a close analogy between the first symptoms of influenza and measles in the human subject.

Before the eruption occurs on the skin in measles there is found to be a catarrhal affection of the mucus membranes lining the air passages and also of the conjunctiva. This catarrh is so constant a manifestation that it has been considered a pathognomic symptom, especially in those cases where the eruption cannot be seen. Here it is, as in influenza, one of the earliest and most constant symptoms.

In canine distemper, we have another disease whose early symptoms coincide with those of influenza. Here we have the disease ushered in with chills, a dry irritated condition of the mucous membranes, where the discharge soon becomes more copious, great debility, and in some cases an extension of the inflammation along the respiratory tract to the lungs and pleura.

In these diseases we have two that are recognized as being due to a specific organism, presenting characteristic symptoms, that almost coincide with those of influenza, and what more probable to assume from this that in influenza we also have a disease whose ravages are due to a similar cause.

The pathological changes in the body are due to the absorption of the morbid material by the blood. The alteration occurs in the blood where we have a rapid destruction of the red corpuscles.

The absorption by the tissues of these disintegrated corpuscles give them a yellowish tint and a congested appearance. The first sign of this is seen in the early discoloration of the mucous membranes. Along with this we always have more or less congestion of the various organs of the body.

Other pathological changes are due to complications, as if the lungs are affected, we have the changes due to pneumonia or pleurisy. If enteritis or congestion of the liver is the complication, we have the changes taking place in them.

The development of the symptoms of this disease, after a period of incubation varying from four to three days, may result in a very mild attack or they may be very intense.

In a mild attack we have the disease running its course as a specific fever, with only the alterations in the blood, but if the attack is severe, we may have it complicated with inflammatory diseases of the various organs, aggravated by the already weakened state of the body and the alterations in the blood which have a tendency to favor a fatal termination of these complications.

The first symptoms are those of great indisposition, rapidly developing fever, which may become intense, chills of the body, staring coat, loss of appetite and a dry, irritated condi-

tion of the mucous membranes. The pulse becomes increased in number, varying from 60 to 80 and even 100; it may be at first moderate in volume but becomes weak. The discharge from the mucous membranes at first is thin and acrid, but as the disease advances it becomes more copious and thicker.

In the condition that is known as pink eye we have the discolored pink condition of the mucous membranes lining the nasal and buccal cavities and the eyelids, tumefaction of the limbs and eyelids, great stupor, and the animal very weak. The fever may run up as high as 105° F. or 106° F., and generally lasts from three to four days.

At the end of this time, if the disease runs a favorable course, the fever begins to abate, the appetite returns, the various organs take on their natural functions, the pulse falls in number and becomes stronger, and we have the animal left convalescent in a weakened condition.

Death in these cases may be the result of an excessive fever with failure of the heart's action, asphyxia from a rapid congestion of the lungs, or from the poisonous effect of the morbid matter due to disintegration of the blood corpuscles.

The complications, as we have before mentioned, are generally of an inflammatory nature. As a result of the primary lesion we have a congestion of the various tissues.

This, along with a distended state of the blood vessels, a weak heart action and an improper aeration of the blood, is very prone to be followed by an inflammation, due to the slightest irritating cause.

During some outbreaks we have the majority of cases complicated with an inflammatory condition of the lungs; in others we have the complications arising in the bowels or liver. Why this should be we cannot determine, unless it is that local climatic changes or atmospheric influences may be the exciting cause of these local lesions, the animal becoming more predisposed due to the pre-existing disease.

To enumerate the systems of the various complications would be to go into those of pneumonia, pleurisy, enteritis, etc., which I do not think would throw any light on our sub-

ject, and which could only be thoroughly discussed under their respective heads.

Treatment must of course depend upon the symptoms exhibited by each particular case, but there are some measures that will apply equally to all.

Great care must be taken to keep the animal free from exposure to draughts, and at the same time have ventilation sufficient to provide him with plenty of fresh air.

He should be well covered with sufficient blankets to keep up external heat, the legs hand-rubbed and bandaged and his surroundings kept clean.

Antipyretics are indicated from the first; of these we have a great variety, and selection must depend upon the practitioner.

I have found a combination of digitalis and nitrate of potash a good remedy, giving it twice a day.

In this we have not only a febrifuge action, but we strengthen the heart, lower its pulsations and have a diuretic effect.

If the fever remains high, two or three doses of acetanilid combined with digitalis sometimes has a good effect.

If the attack is mild, generally all that is needed is good nursing and salines dissolved in the drinking water.

If there is a tendency to constipation, a powder of sulphur and nitrate of potash each day will generally relieve it, along with warm bran drinks or linseed tea.

The treatment in complications must of course depend upon the accompanying disease, remembering at the same time the weakened state of the animal and let our treatment be such as will keep up our patient's strength.

PARTURIENT APOPLEXY IN COWS.

By DR. D. McINTOSH, Champaign, Ills.

(A Paper read before the Illinois State Veterinary Medical Association.)

When I first commenced to practice, I followed the rules laid down on the subject, viz.: bleeding, giving large doses of physic, injections, hot cloths to the back and loins, and ice to

the head, etc., and under this method of treatment very few of my patients recovered.

This state of affairs troubled me very much, and I determined to investigate and find out if we were right as to the nature of this very fatal disease. I read all I could find on the subject. The authors differed so much as to the nature and cause of the disease, that I found very little benefit in this line. My next effort was to make post-mortem examinations of all the cases that died from this disease. The first post-mortem I made surprised me very much, as I found none of the characteristics of congestion or inflammation present. At the next case which presented itself for post-mortem I had the assistance of a medical man well versed in pathology. We made a very careful examination and found no appearance of congestion or inflammation. I made several more post-mortems of cows which died from this disease, with the same result. This led me to think we must be mistaken as to the true nature of this disease, and if so, our treatment must be wrong.

It is a well-established fact that coma or delirium can occur without congestion or inflammation of the brain. An over-distended stomach or deranged state of the nervous system will cause it. Another fact to be considered is, that the symptoms of inflammation or congestion of the brain are very different from those of parturient apoplexy, especially in the early stages of the disease. These facts led me to believe that the disease must be of a nervous character and not congestive. Some writers of note think it is caused from derangement of the sympathetic nerve, and through its action on the blood vessels, caused congestion of the brain. This last part is, I think, where the mistake has been made. The sympathetic nerve controls all hollow viscera, and has a special action on the uterus, and through its connection with the lumbar nerves, deranges the muscles of the loins and posterior extremities first, gradually proceeding forward until the brain becomes affected, producing coma or delirium.

Taking this into consideration, I changed the treatment to strong stimulants, and, to my satisfaction, the patient recovered. I have adopted this form of treatment ever since,

and I never lose a case of this so-called fatal disease. I consider it useless to torment the animal by pouring down large doses of physic. The sympathetic nerve controls secretion and excretion, and on that account the physic will not take effect until the sympathetic nerve is performing its function; and this can only be done by stimulants. The following is the treatment I have adopted:

R Spt. ether nit., $\overline{3}$ xx
spt. ammon. aromatic, $\overline{3}$ x
M.

Give three ounces at a dose, every half hour, in one pint of cold water, until five doses have been given; then, every hour until the remainder has been administered.

Also apply two pounds of mustard, made into a poultice with boiling water, along each side of the spinal column, and cover with blankets. Keep the animal on its sternum by means of bundles of straw. She seems to rest easier in this position. Some one should be in close attendance until she is better. Usually in from eight to ten hours the animal will be able to rise. If the animal has not recovered at the end of that time, it will be necessary to give her ten ounces more of the same kind of medicine. I have had to do this in a few cases.

In my opinion, the best preventive in this disease is to keep the cow in a good, firm, healthy state. This can be done by giving the animal good solid food and not too much of it. In the spring, when the weather is getting hot and the grass long and succulent, keep the cow off such pastures and put her in a place where she cannot get much grass, and feed with dry, solid food, as hay, oats or corn. Soft, sloppy diet is not good. If the animal is fat, soft and flabby, it would be well to give it one and one-half pounds of epsom salts about ten days before calving. It is not wise to give it a few hours before parturition, as it weakens the animal. This treatment I have advised for several years, I think with beneficial results.

THE USE OF VEGETABLE TAR IN VETERINARY PRACTICE.

By DR. A. ROUIF, V.S., Deputy State Veterinarian, St. Louis, Mo.

There is perhaps not a single medical agent so universally employed for local treatment in animal diseases as vegetable tar, and probably there is not one used with so little judgment. It is prescribed right and left, crude and in the forms of ointment with wax, turpentine, etc., according to the oldest empiric formulas of old time farmers, who used tar on all occasions, particularly in diseases of the feet. We all know of the numerous formulas of the French and English in which beeswax, mutton tallow and turpentine enter in various quantities and are mixed with tar more or less imperfectly.

Now tar has real therapeutic value. It is undoubtedly an agent possessed of healing properties, particularly in skin diseases, and it is recognized also internally for lung affections. Of the internal use of the drug I will not speak here. Wherein does its curative value lie in external application? In my judgment, it is because vegetable tar is an ingredient in contact with which microbes will not grow. It keeps a wound, a diseased skin free from the irritation of growing germs, which constitute serious complications of all exposed diseased surfaces, whether primarily due themselves to germs or not. Beneath the application of tar, in a *proper strength* and a *proper preparation*, the diseased parts granulate by the efforts of nature and heal more or less rapidly, uninterrupted by the vegetation of various bacteria and their toxic, irritative products.

But tar is itself an irritant, and in its natural state is unfit for use, and if injudiciously employed, retards the repairs of nature instead of aiding in their accomplishment. Pure vegetable tar, for instance, aside of its being unsuitable because of its stickiness, is decidedly irritant and unfit for a diseased surface of any kind. If employed too strong even in ointment form the same objection in a degree arises. If employed in combination with lard, cosmoline, etc., it usually presents a very objectionable appearance and besides it is very often

granular and when rubbed on a surface the heat melts the basis and the irritant granules of the tar injure instead of having a beneficial influence.

What then is the best method to use tar locally? In my judgment it is in the comparatively new combination known as tarro-petrolene (or other equally well blended tar ointments) which at first appeared on the market with a trade mark attachment and in a black, uninviting appearance, but which in the last year has been greatly improved, has discarded its trade mark, appeared in a clean amber color, free from any granules, and whose composition is open to the medical and veterinary professions in the published "ads." So, it is now, in my judgment, a legitimate combination in which tar is admirably combined with a petroleum jelly, which in itself is not a meagre curative ingredient in the treatment of skin affections and wounds. At any rate, I use tarro-petrolene largely pure, or with an addition of other drugs, with remarkable success in almost every kind of skin eruptions and even in local acute inflammations such as lymphangitis, mammitis in cows, in which it has given me great satisfaction.

In this ointment, tar seems to be dissolved some way and not simply mixed with the excipient, and the beauty of it is, that it is always ready and one has not to wait a whole day for a pound of bad ointment, if he prescribes it at a drug store, or it saves the practitioner mixing and boiling a whole day himself to bring forth in the end only a poor mixture at best.

Tarro-petrolene, it is published, contains a little over two drams of tar to the ounce and, I think, a trace of boracic acid. Any other proper and compatible chemical may be added to it in a particular case where it is desirable. For instance, I have added carbolic acid, aristol, boracic acid, iodoform and particularly naphthol.

In mange and other skin affections (of a parasitic or non-parasitic character) in dogs I have used this successfully with and without the addition of sulphur, creosote, etc. Of course I have not banished the internal use of arsenic and iodide of potassium, but where these and all forms of ointment failed

heretofore I often succeed now by the means here indicated. For instance, I have seen the most rebellious, inveterate cases of scratches in horses yield readily to an internal treatment of arsenic and external application of tarro-petrolene pure where I had uselessly given the same treatment internally for months, and used locally everything that the veterinary pharmacopias in the English and French languages preconized.

Nor is this all: I found tarro-petrolene superior to any tar or other ointment I have yet tried in dryness of the hoof, frog and contraction. It also keeps the flies away. I now use pounds of this preparation weekly with most encouraging success.

EXTRACTS FROM GERMAN JOURNALS.

TRANSLATED BY RICHARD MIDDLETON, D.V.S., Philadelphia, Pa.

CEREBRAL DISEASE IN EQUIDÆ.

Louis reports the following: From October 1, 1889, to January, 1890, six horses belonging to a vine planter became sick under symptoms of vertigo and spasms; two of those died and four were destroyed. Upon post-mortem, the membranes surrounding the cerebellum, medulla oblongata and the spinal cord were found thickened. In the cerebral ventricles and spinal canal a bloody exudate to the amount of five ounces was secured; otherwise no alterations.

As soon as the last case became sick, Dr. L. was summoned; the section in this case was different. Lesions in the abdomen awakened suspicions of anthrax; these were confirmed by microscopic examination.

Another animal afflicted from December 23 to February 17 manifested symptoms similar to the others at various intervals. A very careful examination of the blood of this animal, however, gave negative results.

Eder was unable to obtain satisfactory results by injecting pilocarpinum hydrochloricum in sub-acute cerebritis. We saw six out of twenty-three recover. The treatment consisted of two injections of 0.2 grams antipyrinum with 0.05 physos-

tigminum; cold applications locally and bran mashes. R. recommends the sod. salicylate in cumulative doses, together with acidum hydrochloricum in the drinking water. J. praises antifebrine in doses of 3 v—vii.—*Woch. f. T. u. V.*

RINDERPEST IN EAST AFRICA.

Schynse writes that rinderpest is epizootic in Uruma, and that it has infected all herds, daily sweeping away hundreds. All the animals belonging to his society died, except one which had been given doses of quinine. Of five patients subjected to this treatment one died and the remainder improved; after a time they received no quinine and three of these succumbed. Unfortunately, consideration for the public health made it imperative that the experiments should be stopped.

The disease continued two and three days in those animals not receiving quinine; foam escaping at the nose and commissures of the mouth. On section the gall bladder was filled and tense. Schynse advises European veterinarians to experiment with quinine in this direction, but he is not aware, evidently, that the contagion as met in Africa is totally different. It assumes in that country a malarial aspect peculiar to the hygienic influences of this section of the globe. In short, being malarial it is amenable to quinine.—*Berliner Wochenschrift.*

MEAT INSPECTION.

During the period embraced between the years 1886 and 1889 there have been 24,030 men engaged in meat inspection in Prussia.

In the village of Gersdorf thirty persons have fallen sick of trichinæ. From the subsequent investigation it has been revealed that some eight days previous the afflicted had eaten smoked sausage bought from a local butcher. The meat used in the manufacture of the bologna had been procured from a *meat inspector* of a neighboring town, and was stamped by him as being *free* of trichinæ.—*Berliner Wochsch.*

APPLICATION OF CREOLINE IN CANINES.

Guinard treated dogs affected with acarus by energetic frictions of a five per cent. creoline salve applied twice daily. One patient was cured through the beneficial effects after submitting seventeen days. Another dog, whose body the disease had entirely usurped, succumbed under symptoms referable to creoline poisoning. This animal was rubbed alternately upon the anterior and posterior portion of the body, and was bathed in a one per cent. creoline solution once daily.—*Thier. Woch.*

MAY GLANDERS BE TRANSMITTED THROUGH THE SKIN.

Babes observed a few cases of cutaneous glanders in man without being able to discover the slightest wound or abrasion; he concluded therefrom that the bacillus, after coming in contact with the skin, is by some cause enabled to enter the sebaceous follicles. In this locality he supposes the growth and extension of the pathogenic organism to take place. This it does by insinuating itself between the cells lining the gland and entering the lymph vessels. To prove this supposition, he composes a salve of pure culture of the malleus bacillas, and rubbed the same upon a guinea pig. The animal immediately thereafter evidenced symptoms of glanders. The trials by Nocard, which are given below, differ diametrically from those of Babes.

Nocard rubbed salve, composed of living bacilli, upon the unabraded skin covering the forehead of three mules, and upon the inner side of the thigh in five guinea pigs. Of the eight subjects only two guinea pigs died. From this, Nocard considers himself justified in stating that infection through the unabraded skin is impossible. He attributes the death of the pigs to be due to inoculation through some abrasion.—*Thier. Woch.*

PRESERVATION OF PLEURO-PNEUMONIA BY LOW TEMPERATURES.

L. and P. have just completed a number of experiments with various products of pleuro-pneumonia, whose object was

to determine the effect of cold upon the virus of this epizootic.

They record that a "P.P." lung which had been frozen, retained its virulence over one year. The lymph obtained from this lung possessed the same activity as that derived from a recently slaughtered animal suffering with the disease. The contents of the bronchiæ of the frozen lung, when inoculated in healthy animals, produced positive results after the lapse of several months.

Upon this ground the observers warmly recommend this method of freezing as an acceptable way of conserving pure and diluted virus of contagious diseases, and also as a means of preserving fresh anatomical preparations intended for demonstration.—*Reportoire de pol.*, 1891.

CROUPOUS VAGINITIS AND METRITIS.

In a stable kept scrupulously clean, one or more cows at various times became sick with septic metritis. This always ended unfortunately in spite of immediate veterinary assistance. At the end of the present year we were again called in to inspect a cow in severe labor, and which at every pain threatened to prolapse the uterus. Examination of the uterus, which in the last parturition had protruded half its length, revealed it to be in a normal position. With the exception of a few small wounds, which might have been caused by obstetrical instruments, no injury was detectible. Chloral, ice, etc., operated in no degree to diminish the straining. The uterus was irrigated with a 1.5 per cent. solution of creoline in quantities of ten liters three times daily. The expulsive efforts and temperature of 104° F continued. On the eleventh day we removed a complete counterpart of the uterine cavity, composed of a tough, schirroid deposit; shortly after the morbid symptoms disappeared.—*Woch. f. Th. u. Vh.* 33.

AZOTURIA.

As early as 1874 Thomas communicated that azoturia was more prevalent in years yielding a good wine crop, as in

these years especially, potatoes, beets, etc., contained excessive percents. of saccharine matter. He attributes the disease to the superfluous sugar. In mild cases he prescribes hot wine; in more serious ones he gives, with good results, subcutaneous injections of pilocarpine, followed in the second day by intratracheal injections of pot. iodide $\frac{3}{4}$ iss. three times a day. "S" has observed azoturia in two oxen; the symptoms not varying in any manner from those of the horse. The attack lasted twenty-four hours and terminated in recovery. The oxen were taken from an overwarm stall early in the morning and yoked to the plow.—*Woch. fur T. u. V.*

A NEW HORSE FOOD.

Scheur-Kestner has already succeeded in producing a novel bread from chopped meat, sour dough and meal; this food is practically imperishable, and of fine texture. Chardin used the blood from cattle instead of meat, and has made several varieties of bread, which is free from all specific tastes. This was fed to horses, sheep and rabbits with uniformly good results. Chardin considers this bread of great value as a food for horses in war, and, if need be, for men also.—*Annales de Med.*

BIBLIOGRAPHY.

AGE OF THE DOMESTIC ANIMALS. BY PROFESSOR R. S. HUIDEKOPER, M.D. (F. A. Davis, Philadelphia.)

This handsome octavo is from the pen of our friend, the well-known editor of the *Journal of Comparative Medicine and Veterinary Archives*. To many readers of the *Journal*, the "Age of the Domestic Animals" will seem to be little more than a reprint, in book form, of a long series of articles which have appeared in the former publication during the last two years, but a careful perusal of the work will satisfy the reader that it is much more than this, and that many corrections and important additions to the serial matter have made the new "Age" our most valuable guide in this important branch of

veterinary practice and science. The literary execution of the book is very satisfactory, the text is profusely illustrated, and the student will find abundant means in the cuts for familiarizing himself with the various aspects presented by the incisive arches during the different stages of life. The phenomena of the characteristic evolution of the teeth of all our domestic animals is fully considered, and the illustrations, both original and borrowed, are executed in a manner adequate to the importance of the subject. Illustrations do not always illustrate; these do. The book is completed by an appendix upon human dentition, which thus renders it a thorough and complete treatise upon dental development.

This is, we believe, the first work of importance with which the profession has been favored from the pen of Professor Huidekoper, and we hope that its reception by veterinarians, breeders and by lovers of horse-flesh will be such as to encourage its author to hasten the completion of other works, which, according to rumor, he has in preparation.

It is by the multiplication of books of this character that we may hope, within no long period, to possess an original American veterinary literature which may, without discredit, fraternize with that of old Europe.

It rests largely upon our younger men to accomplish this. When will the ambitious and competent among them make themselves known?

THE VETERINARIAN'S CALL BOOK. By PROFESSOR ROSCOE BELL, D.V. S. (Sabiston & Murray, New York City.)

It should be gratifying to veterinarians to know that at last one amongst them has undertaken to furnish his brother practitioners with one of those compendious conveniences which, when we at length possess it, causes us to wonder how we ever did without it. They have been common for years back in almost every country, excepting our own, and we hope, therefore, that if for no other reason, this maiden attempt of Professor Bell will receive a liberal and justly deserved welcome at the hands of veterinarians throughout the country. It contains a large amount of information relat-

ing to veterinary matters, not only in our own country, but amongst the practitioners of Europe as well. A perpetual yearly register is intended to relieve busy practitioners from the annoyance of daily book-keeping. It gives also an *Annual Record*, containing lists of veterinary colleges, societies and associations which, not at present complete, will no doubt be corrected and perfected in future editions.

The "Veterinarian's Call Book" is a successful effort to supply a want of the profession, and we hereby tender our sincere compliments to the author.

PRACTICAL GUIDE TO MEAT INSPECTION. BY PROFESSOR THOMAS WALLEY, Principal of the Edinburgh Veterinary College. (Young J. Pentland, Edinburgh.)

With this title Professor Walley, one of the best qualified authorities on this subject in Great Britain, issues a second edition of his book on meat inspection, and it will be accepted as one of the most important of recent additions to English veterinary literature. In the two hundred pages which compose this excellent work, Professor Walley describes the method which should be pursued by the veterinarian in the performance of the duties pertaining to this special branch of sanitary medicine, and initiates him into the details necessary to follow in his investigations of the condition of food meats, and the causes and appearances by which it is rendered safe or otherwise for human consumption; illustrating his text by nearly fifty truthful plates which exhibit the facts in aspects most natural and instructive. Professor Walley is widely and favorable known to the English reading sanitarian through his work on bovine scourges and his numerous published papers on the subject of meat inspection, as well as by his participation in the discussions on sanitary science in the British veterinary societies. His standing and reputation, thus acquired, are sufficient vouchers of his ability to do justice to this, probably not yet properly cultivated department of our profession. "The Practical Guide to Meat Inspection" will, no doubt, prove to be a very serviceable book to the English veterinarian and for us in America where meat inspection has just received,

at the hands of the Department of Agriculture and of the Bureau of Animal Industry, the national recognition and authorization to which it is entitled. The book is also destined to be of eminent value, and an authority which the American veterinarian and sanitarian cannot afford to ignore.

THE SUPREME PASSIONS OF MAN. BY DR. PAUL PAQUIN, M.D., V.M.
(Little Blue Book Co., Battle Creek.)

A well-known writer in veterinary and scientific subjects has in this little addition to the Little Blue Book series of publications brought forth a semi-scientific and semi-religious treatise on "The Supreme Passions of Man," which he dedicates to his mother and to his beloved wife. This fact alone is sufficient to indicate the character, the quality and the value of the contents which make up the pages of the book. With the sentiments thus implied, and dealing with the most profound and sacred of human motives and sympathies, and inspired by the purest and gentlest of the better impulses of our nature in the filial and the conjugal instincts, what better theme, or more attractive, could an author select with which to approach an appreciative and expectant class of readers, such as are sure to be interested in a work so entitled? "Supreme Passions" is full of pertinent suggestions and profitable thought relating to the subject of which it treats, with wise conclusions and valuable suggestions, and forms a magazine of good counsel and items of excellent advice which no man can fail to find profitable if well heeded.

EXTERIOR OF THE HORSE.—BY ARMAND GOUBAUX AND GUSTAVE BARRIER, translated by Prof. J. J. Harger, V.M.D., Veterinary Department of the University of Philadelphia. (Lippincott Co., Philadelphia).

Since the publication of Percivall's work on the External Forms of the Horse, published in 1850, there has been nothing in English written on this important subject. This translation of the standard European work of Goubaux and Barrier, therefore, fills up an important vacancy in our veterinary literature. The translation of Prof. Harger has, therefore, come just in time, and his selections of the French book must

evidently lead to the establishment of a special department in our veterinary schools. Our students will then have an opportunity to become educated in one of the preliminary branches of veterinary knowledge, and acquainted with an essential subject pertaining to a thorough veterinary training. Nor will it be the veterinary student alone who will profit by the study of the book, but all who are interested in obtaining the information it contains.

"Exterior of the Horse" is divided into eight sections, these being subdivided into chapters. In the first section the reader is made acquainted with some rules of physics relating to the center of gravity, the lever and muscular mechanism, and the inclined plane. The second section treats of the various parts of the body by regions. The third relates to the proportions, viz., "the agreement and correlation as applied to the different parts of one whole." In the fourth, the important subject of locomotion is treated *in extenso*. The fifth makes us acquainted with important points pertaining to the age of horses, the teeth being carefully considered, both from a general point of view, and with reference to their characteristics as affecting the determination of the age. In the sixth section the reader is initiated into the important subject of the identification of the animal by the examination of the general and special features that distinguish individual animals from one another. In the two last the aptitudes for work, and the consideration of the various vices of the animal are treated at length, the last section being appropriated to concise counsels in respecting the selection of a horse.

The numerous and excellent illustrations, numbering not less than eight hundred and fifty-four, are neat and clear. The literary execution is good, and makes easy reading. The publisher's work is far above almost anything published in the average of veterinary works. Altogether "Exterior of the Horse" is a superior work, which does great credit to the authors and translator, and we have no doubt will meet with general and deserved acceptance by veterinarians and others.

COMPARATIVE ANATOMY OF THE DOMESTIC ANIMALS. By A. CHAUVEAU. Translated by George Fleming.

In reference to our notice in December issue of this excellent work, we have received the following:

DEAR MR. EDITOR: In the notice you kindly give of my translation of Chauveau's Comparative Anatomy of Domesticated Animals in your REVIEW for the present month, complaint is made that the new edition is based on the third French edition. Please allow me to state that this is not the case. In the preface you will find it mentioned that the fourth edition, issued last year, was the one referred to. I have not seen the third edition. Hoping you will allow this correction to appear in the AMERICAN VETERINARY REVIEW,

I am yours sincerely,

GEORGE FLEMING.

In answer to this we may say that we have found so little difference in the text in both the third and fourth editions that, taking into consideration the absence of the new colored plates in the second English, we concluded that the translation was made from the third French. We are pleased to correct our error.

NEW VETERINARY GRADUATES.

ONTARIO VETERINARY COLLEGE.

"The results of the December examinations in connection with the Ontario Veterinary College, Toronto, were announced last night at the college building on Temperance Street. The following have passed a successful examination and as graduates are awarded the diploma of the Agriculture and Arts Association of Ontario:

Edgar A. Bogart, Kettleby, Ont.; Thomas H. Brooke, Don, Ont.; George C. Brownridge, Brampton, Ont.; James Conrad Carter, Gowanda, N. Y.; James H. Chesney, Brucefield, Ont.; John M. Colvin, Wingham, Ont.; Thomas A. Corsant, Ilderton, Ont.; Adam Elgas, Hartford, Mich.; William Elliott, Delhi, N. Y.; Joseph Fotheringham, Mason City, Iowa; George H. Gibb, St. Mary's, Ont.; Richard T. Kidd, Listowel, Ont.; John Edwin Law, Ithaca, N. Y.; Charles F. Leslie, York, Neb.; B. B. Myers, Linville, Va.; Bernard R.

Poole, England ; Robert E. Stevenson, Toronto, Ont.; Jacob Wilhelm, Shakespeare, Ont.; Louis A. Willson, Eglington, Ont.; George E. Young, Toledo, Ohio.

The following have passed primary examinations only in the subjects stated : Asa A. Brown, Alfred T. Goldie, in anatomy ; Horace Panet, James A. Wake, in materia medica."

OBITUARY.

FRANK J. HANSHEW.

We are notified of the death, on January 15th, of this bright member of the veterinary profession. He graduated at the head of his class, was beloved by his classmates, and honored and respected by all who knew him. Thirty years ago Dr. Frank J. Hanshaw was born in Brooklyn, N. Y., graduated from Public School No. 1 of that city, and soon after entered the American Veterinary College, graduating in 1883, and was awarded the gold medal for the best general examination of his class. A few months after he was appointed veterinary surgeon to the Third Gatling Battery, N. G. S. N. Y., stationed at Brooklyn, where he, jointly with his brother, Dr. Elisha Hanshaw, laid the foundation of a successful practice. The sudden announcement of his death from apoplexy was a shock to his friends, as the day previous he was in apparent good health and performed an operation that day, but on retiring that evening complained of his head, and after a few words, which seemed to indicate that he suspected there was serious trouble there, retired for the night ; was soon noticed by a member of his family to be breathing heavily, never gained consciousness, and passed away in a few hours. The class of '83 contained no more congenial member than him ; full of life, but sympathetic and generous to a fault ; yet withall a hard student, who was ever ready to dispense what knowledge he possessed, thus endearing himself to his classmates.

The funeral took place from St. Ann's Church on the Heights, Brooklyn, on the 19th inst., and the blending of the

Episcopal, the Masonic and the military rites was a touching tribute of the respect in which he was held by all his associates. The body, inclosed in a casket that was shrouded in the American flag, and completely covered with flowers, was borne to St. Ann's on the shoulders of his comrades of the battery, to the mournful notes of the bugle's funeral dirge, and the Rev. Dr. Alsop performed the last solemn rites of the Episcopal Church, assisted by twelve choristers. Before the body was removed from the church many of his classmates, who had attended the funeral, took a final leave of the youngest and brightest of their class, who was the first to leave for the great unknown.

W. H. P.

SOCIETY MEETINGS.

IOWA STATE VETERINARY ASSOCIATION.

FIRST DAY.

The fourth annual meeting was called to order in the parlor of the Savery House, Des Moines, Iowa, at 10 A.M. November 12, 1891, by the President, Dr. L. A. Thomas.

The members present were: Drs. Thomas, G. A. Johnson, M. E. Johnson, Inger, Derwent, Platt, Edwards, Shipley, Campbell, Stewart, McBerney, Morse, Miller, Brown, Stalker, Norton, Gibson, Ovens, W. B. Niles, Graves and Howell.

Guests: Drs. L. N. Shipley, of Sheldon; H. L. Chatterson, of Peterson; S. Whitbeck, of Elma; G. F. Starkey, of Boone; W. A. Haeck, of Harlan; W. H. Austen, of Newton; Woods Hutchinson (M.D.), of Des Moines.

The minutes of the last meeting were read and approved.

The Secretary called attention to the case of J. A. Campbell, stating that he had complied with the first part of the conditions for his exhonoration. Dr. Campbell then stated that he had complied with the second condition, which statement was confirmed by Dr. Shipley. Upon motion Dr. Campbell was declared exonerated from all charges.

The President appointed Drs. Inger and Platt as Auditing Committee, and Drs. H. Shipley, G. A. Johnson and F. Edwards as Censors, to fill vacancies on the regular board.

AFTERNOON SESSION.

Association called to order at 1 P.M.

The Secretary read several letters and telegrams from absent members, expressing regrets for non-attendance.

The President presented the following address:

GENTLEMEN: Since the organization of scientific bodies such as this it has invariably been the custom for the presiding officer to base the subject of his annual address upon matters of recent scientific research pertaining to the profession.

But owing to the fact that the programme for this meeting promises to supply ample material of this nature, I feel that I may be permitted to deviate somewhat from the established precedent, and instead calling your attention to the growing necessities for professional advancement, and endeavor to point out some of the means by which we may more effectually promote the welfare of our patrons and the laity in general, thus enabling them to appreciate in a correct manner the value of the veterinary profession and to realize to what a great extent they are reliant upon this profession for the preservation of human health from a sanitary standpoint. Having this aim in view we should at this meeting discuss the necessity of stricter sanitary legislation, and formulate such resolutions as would tend to remedy the present deficiencies in our State laws.

For some time past it has become evident that some of the sanitary laws of this State require revising and amending in such a manner as to keep pace with the rapid and important advances made in medical science. It is true that in many respects this has already been accomplished through the increasing efforts of our State Board of Health, and that the laws now in existence have been carried out to their full intent, notwithstanding the repeated and almost insurmountable obstacles with which the Board has had to contend. But in order that the members of the Board of Health, and those acting under them, may effectually cope with all and every class of sanitary conditions, it is eminently necessary that such laws as have proved ineffectual should receive the earnest attention of our next Legislature, and proper measures be taken to revise and amend such sections as are found inadequate or void of beneficial results.

At the present time there is a law in existence which is both absolutely worthless and detrimental to the public health, as well as being productive of an immense annual pecuniary loss to the live stock industry of the whole State. I allude to Chapter 79, Laws of the Twenty-first General Assembly. At the time this law was passed the nature of hog cholera was not very well understood; owing to this fact a most unfortunate provision was made, allowing the owner of animals which had died from the effects of the disease to dispose of the carcasses, either by burning or burying them to a depth of not less than thirty inches.

According to the more recent investigations it has been proved that the burying of cholera hogs is a disastrous mistake, owing to the fact that the virus producing the disease increases in strength and severity through the medium of earthy matters, and that where hogs in this condition are allowed to be buried a

center of disease is thereby established the infective substance of which is brought to the surface through the workings of worms and rats and other species of like vermin. As the only effectual method of destroying the germ of hog cholera is by fire, it is evident that no choice should be allowed, and the law should be explicit on this point.

Hog cholera is an infectious disease, the primary symptoms of which are often much varied and complicated. It is therefore advisable that the law should provide stringent quarantine regulations, which should be maintained and carried out by the local Boards of Health under the direction of the State Veterinarian, and that the carcasses of all animals which have died from the effects of the disease should be destroyed by fire without removal from the premises.

One of the chief factors by which the disease has been spread to such an alarming extent is the existence of the so-called dead hog rendering establishments, one or more of which may be found in almost every county in the State; these under the present state of affairs are pest houses of the most virulent type, and are owned and maintained for the most part by the lowest and most unscrupulous class of men, who appreciate the fact that the law as it now stands is unable to reach them, and that they can therefore carry on their loathsome vocation with comparatively little, if any, interruption.

It would also be advisable for obvious reasons to prohibit all traffic in dead animals (except such as are slaughtered) without a permit from the local Board of Health, whose duty it should be to satisfactorily ascertain that no contagious or infectious disease had existed, and that the carcass was not in an advanced stage of decomposition.

THE MEAT INSPECTION LAW.

The time has now arrived when the people of the United States look upon the veterinarian of to-day as a sanitarian, and have resolved through the action of Congress to avail themselves of the services of this rapidly advancing branch of science.

The first intimation of this intention was manifested by the enactment of a meat inspection law, passed by the Fifty-first Congress of the United States. This affords an immense field for scientific research, as well as being a most important sanitary precaution. Under the provisions of this law a thorough system of meat and dairy inspection may be instituted in every county in this State.

It is therefore pre-eminently the duty of all local Boards of Health to at once make such regulations as will effectually prevent the sale and consumption of diseased meats and dairy products, and thereby protect the public from this great source of danger to human life.

Let us therefore, as veterinarians and citizens of Iowa, at once assume the aggressive in this matter, joining hand in hand with our sister profession, constituting ourselves the champions and advocates of sanitary food regulations.

Let every member of this Association avail himself of the daily opportunities afforded him within his own community to engender among his fellow citizens a true knowledge and understanding of the dangers which they continually incur, from eating food which is unfit for human consumption.

Our efforts in this direction will be productive of much good to the masses, for when the people thoroughly understand how many of the diseases of the human family may be prevented by proper sanitary precautions, they will demand competent inspection of all food before it is placed upon the market.

THE PROFESSION.

It is with great pleasure that we note the formation of a Western Iowa Veterinary Medical Association; and most earnestly do we recommend the formation of district associations in other parts of the State, this being the most effectual factor to promote fraternal fellowship and professional culture, at the same time establishing a bond of sympathy with our sister profession, thus enhancing to a great extent the usefulness and value of both branches of medical science.

As a profession we have many serious responsibilities to assume, and numerous obstacles to overcome.

For many years past the practice of veterinary science has been confined almost entirely to a class of persons having little or no education and but few ideas or ambitions beyond those of the ordinary stable element; on account of this it can well be understood how public sentiment refused to grant the same prestige to the veterinarian (?) of earlier days as it did to members of other professions.

During later years these conditions have been very materially changed, and the cloud of social and professional illiteracy enveloping veterinary science has been gradually but surely passing; until to-day we stand before the world a body of professional scientists ready and willing to assume all the responsibilities rightfully belonging to the domain of veterinary science, and demanding that society acknowledge our eligibility to meet within her halls and mingle on terms of equality with members of other reputable professions.

Both branches of medical science are to-day fairly launched upon the sea of investigation, striving to unravel the labyrinth of obscure and oftentimes mysterious causations of disease.

Many are the perplexities and disappointments which are encountered; and many the schismatic storms, which by their tempestuous blasts of jealousy, threaten to capsize and engulf this venturesome barque, bound on its perilous voyage of discovery; but nothing daunted, this gallant craft maintains her course, manned by her crew of stalwart investigators, ever and anon rising high on the crest of the waves, which but a short time before threatened in their fury to overwhelm her.

The port of destination is still far in the future; yet away out on the distant horizon we see the signs which betoken a successful voyage for our barque; and the promise that she will ultimately arrive safe within the scientists' harbor of "Deferred Hope;" and as a result we see the time approaching when the science of prophylaxis will, in a great measure supersede the curative medication of to-day.

One evidence of improved professional and social standing is in the increasing recognition of the importance of our profession by the sister and other professions and learned societies; the calls that are now made for professional

services and information by agricultural societies, colleges and stock-breeders' associations, and the position in life occupied by many of our members who are known to be gentlemen of ability and social standing.

To the medical profession for material assistance in the past we owe a debt of gratitude, and now that we are able to walk and act our part alone, as concerned with the well-being of the lower animals we trust to be co-workers with the sister profession in the extensive field of comparative pathology; for in certain directions it is a well recognized fact that the two professions are in touch, necessitating a combined work for the complete and accurate investigation of those diseased communicable from animal to man.

So much is this beginning to be understood and appreciated that at the last meeting of the International Congress of Hygiene and Demography in London, there was an official recognition of the value of the veterinary profession, many veterinarians of note taking part in the discussions on tuberculosis.

May such be the course adopted here, when like diseases are under consideration in this country, for from such combination of forces great benefit will accrue to the public and both professions.

OUR ASSOCIATION.

There are many matters of importance to be discussed at this meeting, foremost among which is the subject of state veterinary legislation. For some years past we have had this matter under consideration and every effort has been made by the Committee on Legislation to encourage discussion and obtain an expression of opinion from each individual member of the profession, in order that when circumstances favored our petitioning the Legislature, we should be enabled to draft a bill such as would receive the unanimous support of all parties interested. The committee will report to you the results of their investigations, and if after due consideration of the same, the Association is of the opinion that it will be for the best interests of the profession to at once take active steps in this matter, let us spare no pains to compile a bill such as will effectually overcome and prevent the impositions and misrepresentations now practiced upon the public; at the same time making provisions which will be fair and just towards non-graduates, and enable the public to understand the difference between qualified and unqualified practitioners.

GENTLEMEN: Allow me to touch briefly upon our pecuniary interests, which under the present circumstances are not unworthy of consideration. We have now over one hundred qualified veterinarians practicing in Iowa, many of whom have no fixed rates of fees to guide them in their charges; and in many localities, as I am informed, professional services are rendered at prices in some instances barely remunerative; this seems unnecessary and even productive of anything but beneficial results to the profession at large. There is ample work for all who are possessed of industry, ability and skill, at remunerative prices.

Can we not therefore combine in such a manner as to have a uniform scale of fees throughout the State, thus serving the public fairly and at the same time protecting our own interests?

In conclusion, gentlemen, allow me to thank you most sincerely for the honor conferred upon me, and for the courtesy shown me during my term of office as President of this justly prosperous Association.

In explanation of the first portion of his address, Dr. Thomas stated that a man owning a hog-rendering establishment in his county was in the habit of going to farms at night where hogs, dead from cholera, had been buried, and would dig them up and haul them over the public highways to his rendering establishment. That it was probable that the disease was propagated in this manner. This class of men studied the weaknesses of the law and made use of every subterfuge when prosecutions were instituted against them. The safe thing to do was to burn every cholera hog.

Prof. Stalker said it was advisable to resort to the burning process, for the large profits in the rendering business induced men to violate the law. In his opinion the hog buyers who went from farm to farm, walking through many hog yards the same day, and rousing up the lazy or ill ones to see whether they were all right, became, in this way, active transporters of the germs of hog-cholera from one pen to another.

Dr. Hutchinson: I am very much interested in the President's address, and as it voices the sentiments of the veterinary profession, I must congratulate you on the fact that you, as a profession, are so deeply interested in the coming phase of medical science, the prevention of disease. The medical profession must depend on you to do a large share of this work.

Dr. G. A. Johnson: I would like to say a word about the idea of a uniform tariff or fee bill; I am heartily in sympathy with that idea; we ought to have some standard to guide us. Graduates come into our State from Canada and elsewhere, and, not realizing the difference in countries and conditions, perform veterinary services at ruinously low rates, and establish prices in their communities far too low for legitimate professional fees, and I move that this Association proceed to draught a fee bill. Seconded by Dr. Brown.

Dr. Johnson then presented a fee bill which he had prepared, which was read by the Secretary. A live discussion followed by Drs. Morse, Brown, Gibson, G. A. Johnson, Thomas, Norton, Edwards, Stewart and Platt.

Moved by Dr. Inger to amend the motion so that it may be referred to a committee; seconded and lost.

The fee bill submitted was read again and some of the provisions modified, after which it was adopted by an unanimous vote.

Moved by Dr. Brown, seconded by Dr. Norton, to have one hundred copies of fee bill printed and distributed among the members; carried.

Dr. Stewart presented the following report on collective statistics:

GENTLEMEN—Your committee report the receipt of forty-eight notes on heredity from twelve members of this Association. Last year only five members responded to the call. If this ratio of interested members should continue to increase at the same rate during the next two years, every member would have at least one case to report in 1893. This year nearly all cases reported have a positive history, which makes the few notes received have a definite value.

Of the notes received, nine were cases of ringbone, thirteen spavin, nineteen specific ophthalmia, four kicking, two cribbing and one melanosis. The cases of ringbone were all males excepting one, and all bays excepting two. The disease developed in one at the age of three and one-half months, in five at two years, in the remainder at four, five and nine years. In two the history is not given, in seven the sires and dams were sound, in only one case were other offspring of the same sire similarly afflicted.

The spavins were about equally distributed as to color and sex, and were developed at ages varying from fifteen months to ten years, and the several breeds shared the defect about equally. The disease did not afflict the sire of any, but the dams of three had spavins. In all cases where the grandparentage could be traced only one was found to be spavined, and in this case three generations of females possessed this disabling blemish.

Specific ophthalmia is reported in eleven draught horses and seven trotters, gallopers and roadsters. Eight were bay, four black, four grey and two brown. The average age of development in the draught breeds was three years, in the others four years. This malady afflicted the sires of three, the dams of six, the grandsires of two and the granddams of four; it also developed in other progeny of five guilty sires and dams. In eight cases the notes show positive freedom of the progenitors from ophthalmia.

The four kickers are all females, with no history of heredity attached, and the two cribbers could not blame their ancestry.

The case of melanosis is of peculiar interest, in that the mare was a bay, and the disease became discoverable at the age of three; further, a full sister, of the same color, developed this disease at the same age. No trace of inheritance given.

We sincerely trust that interest in this line of research will be developed to the full degree which its importance merits, that the notes which are collected from year to year may be preserved for future compilation. You ought to secure five hundred cases with positive history next year. We conclude, from the lack of enthusiasm taken in this interesting field of research, that the fault

lies with your committee, and we trust that the committees who assume the conduct of this line of work hereafter may possess the charm or magnetism which will hold the attention of all the members to their duties in this matter.

The discussion on this report was quite general and brought out many histories evidencing the continuance of vice or deformity through three or four generations. Several instances were cited in which colts seemed to have acquired the vice of cribbing by association with an aged horse having this habit.

On motion, the report was received and the committee discharged.

The Board of Censors reported favorably upon eleven applications for membership and unfavorably upon one.

Moved by Dr. Morse, seconded by Dr. Brown, that the Secretary cast the ballot of this Association for each of the applicants found worthy of membership. Carried.

The Secretary—Pursuant to instructions, I cast the ballot of this Association for each of the applicants found worthy, and the following-named gentlemen are duly elected members of this Association: Samuel Whitbeck, Elma; L. U. Shipley, Sheldon; W. A. McClanahan, Ames; H. L. Chatterton, Peterson; J. O. F. Price, Clear Lake; J. E. Harrison, Burlington; R. Thomas, Oelwein; W. A. Heck, Harlan; G. F. Starkey, Boone; Wm. H. Austin, Newton; John J. Miller, Sioux City.

The Secretary submitted the following report:—

Mr. President and Gentlemen:

The increasing membership, the strength and character of the work done in our Association should be a source of congratulation, and a stimulus to further efforts to excel. Our code of ethics is wholesome and strong, and will aid us to esteem our profession. The line of painstaking investigation which is started in the study of heredity ought to lead us into many useful fields of research and develop us into a society of investigators. Let us develop this phase of scientific labor, and as a body do a definite work for the enhancement of our beloved profession.

The *Vis Medicatrix*, a journal representing the Iowa State Medical Society, offers the veterinary profession of Iowa a place in its columns for representation as a sister profession which has many lines of work in common. I recommend the acceptance of the proffered space, for the purpose of nurturing the field of comparative medicine, and engendering a social and professional bond of fellowship within our State, which must prove helpful to all laborers in the field of medicine.

The scope of sanitary science is rapidly extending and much of it should fall to the care of veterinarians. Let us but acquaint the physicians of our State with the fact that we are prepared and ready to do our own share of sanitary labor, and they will aid us to assume the responsible share that our special training has fitted us to do.

The number of graduate veterinarians in our State is about one hundred, of which sixty-one are members of this Association, and twelve more have filed applications for membership. Our present prosperity should stimulate our enthusiasm and zeal to make each succeeding annual meeting more profitable and enjoyable than any previous one, and prove sufficiently attractive to compensate for the expense and time incurred by the attendance of members from remote portions of the State.

There have been between seven and eight hundred communications issued from the Secretary's office during the past year. The necessary labor attached to the proper conduct of that office is now becoming considerable and has been done in the past without expense to this Association. As I expect to transfer the burden of this office to some one to be selected during this session, I would recommend that you at least make provision for defraying his necessary expenses incurred by attendance at these meetings. You are aware how important it is that the Secretary should be promptly on hand at the opening of each session. He must consider the Association first and his business interests second, while you may reverse this order. If his expenses be defrayed it will prove a stimulus to acceptance of the trust which otherwise might be declined by some young man well qualified to fill the office acceptably, and who by so doing would probably be in attendance at your next session.

I am gratified for the kind encouragement and cordial support you have extended to me as your Secretary, and I trust you will extend the same courtesies to my successor, for I hereby give you notice that I cannot undertake the onerous duties of this office another year. I hereby submit my final report for your consideration.

S. STEWART, Secretary.

The President: The Secretary's report is before you. What is your pleasure?

Moved by Dr. Norton, seconded by Dr. G. A. Johnson, that the report be received and discussed; carried.

Dr. Edwards: Do you understand that the Veterinary Department of the *Vis Medicatrix* is offered for the use of this society, and if so, are you to continue in charge of it?

Secretary: Yes! The limited space of four or five pages are at our command, but as to who shall have editorial charge of it remains for you to determine. Of course the *Vis* expects this department to be managed in the interest of comparative medicine, and in that spirit which will tend to unite the two professions in our State in a bond of common fellowship.

Dr. M. E. Johnson: Will it be expected of the editor that he shall furnish all the material for the space allotted?

The Secretary: The person who accepts the management of that work will surely desire the assistance of every member of this Association. This journal is only published by-monthly, and this department will not in any sense enter into competition with our two excellent veterinary journals, but is of value to us as a local means to an end.

Moved by Dr. Gibson, seconded by Dr. Platt, that Dr. Stewart be elected the Association editor of the Veterinary Department of the *Vis Medicatrix*; carried.

Dr. Stewart: I thank you for this confidence; I accept the trust with the understanding that I shall receive your assistance.

Dr. Miller: I suspect that our finances are not such that we can afford to pay our Secretary a salary, but I think it is no more than just that his expenses be defrayed, for he of all others should be present at our meetings.

Dr. Ovens: I should like to know how much money there is in the treasury.

The Treasurer: About fifty dollars.

Dr. Thomas: I do not think we can afford to pay the Secretary a salary with the present low annual dues, but we can afford to defray his expenses.

Moved by Dr. G. A. Johnson, seconded by Dr. Norton, that hereafter the necessary expenses of the Secretary and his dues shall be paid by the Association; carried.

Moved by Dr. J. E. Brown, seconded by Dr. M. E. Johnson, that the Secretary's expenses for this session be paid by the Association; carried.

EVENING SESSION.

7.30 P.M. Meeting called to order by the President.

Dr. J. E. Brown's paper, on "Parturient Apoplexy," was advanced on programme.*

* Published in this issue.

DISCUSSION.

The President: Dr. Brown has given us quite an exhaustive discussion of his theme, and has presented many phases of thought upon this very doubtful subject. It merits thorough discussion.

The Secretary: It occurs to me that the paper very fully canvasses the etiology and symptomatology and shows a comparative relationship between indigestion and parturient apoplexy. Many quotations are made from Prof. Williams' work on veterinary medicine, but I notice none from the recent papers by Dr. W. L. Williams, of Purdue University, and Dr. Tait Butler, of Mississippi Agricultural College, which papers discussed the cause and symptoms of this disease. I have had very little experience in the treatment or study of this disease. I call to mind a recent case, seen in that stage where difficult locomotion is a prominent symptom; she laid down from weakness several times while traveling about two hundred feet to shelter from an impending storm. Other symptoms characteristic. Administered this cathartic dose: magnesia sulphate sixteen ounces, soda sulphate sixteen ounces, powdered gentian one ounce and powdered ginger one-half ounce. Water sufficient to make a quart. Ordered the attendant to repeat the dose in one hour. The owner reported the animal better the next morning and the case recovered without further attention. A successful Omaha veterinarian employs this medication with copious rectal injections of warm soap-suds. He claims a high percentage of recoveries.

Dr. Norton: My experience in the treatment of this disease is limited, but I think nux vomica has served me well in a few cases.

Dr. Morse: I have been treating these cases lately with chloride of ammonium, and it seems to act nicely. I cannot explain how it acts, but consider it a useful agent. I give it in tablespoonful doses, repeated every few minutes for several doses. In the first trial I made with it, the owner was informed that there was no probability of recovery, but no harm could come from the use of the drug. The cow was

down, comatose, and I had no hopes of her recovery. The owner secured a quantity of the drug, and gave it to his cow as directed, and to my surprise he reported his cow much better the next day and she made a good recovery. I have now treated three cases with this remedy, two of which recovered.

Dr. Edwards: I have done my part toward killing several cases of this disease. I find that when the cow is comatose, and I hold her head up and pour the medicine into her mouth, I have been deceived in thinking she had swallowed it, but instead, all or a part finds its way down the trachea and the animal soon dies of suffocation. It is now my habit to introduce the medicine into the stomach through a probang, and I have a better per cent. of recoveries.

Dr. Thomas: I know several practitioners who use stimulants in these cases and give eight ounces of whiskey and eight ounces of spirits of nitrous ether as a dose. This treatment has failed with me.

Dr. Platt: I cannot accept Dr. Brown's theory that parturient apoplexy is due to anæmia of the brain. If it was due to plugging of the vessels with emboli, why do cases often recover so rapidly and completely? Surely the emboli are not readily dissolved and the obstructed circulation made normal again. I am satisfied that the brain trouble is due to congestion of the brain. The last case I had I treated with large doses of ergot with satisfactory results, and I shall try it in the next case.

Dr. G. A. Johnson: I find it a difficult thing to secure purgation with salts in these cases. I know that croton oil will purge, for a quack doctor in my community gave a case of this disease an ounce of the oil at night and gave seven ounces in the morning. The cow died from superpurgation.

Prof. Stalker called to mind a case of parturient apoplexy about which a farmer consulted him. He said: "The cow was down. I prognosed death, but advised a purgative, as they sometimes recovered after such a dose. A neighbor bled the cow, the cow recovered without the purgative dose. It is quite probable that some cases will recover without

medication or in spite of medication, so it will require many recoveries under any special line of treatment to establish the efficacy of that especial plan."

Dr. Brown: I will say that I have tried the ergot treatment advocated by Dr. Platt and my cases died. I do not think that purgation has saved any cases for me. Dr. Coswell, of Lincoln, claims to save a large per cent. of his cases by a mixture of fl. ext. pulsatilla and fl. ext. life root, given two drams every two hours. So after getting his prescription, I tried it on the first case I was called to and the case made an excellent recovery. I was happy. I used it in the next case and the cow died. My enthusiasm was now somewhat dampened, but I determined to give the remedy a thorough trial and used it on the succeeding six or eight cases with fatal results. I have yet to find a plan of treatment which I can recommend to my brother practitioners as a sure thing, but think the plan as outlined in my paper will yield the best results.

The Committee on Legislation reported as follows:

GENTLEMEN: Your Committee on Legislation reports as follows:

Upon consideration of the opinions expressed by the members of this Association at our last annual meeting, we recommend that measures be taken towards procuring the enactment of a law such as will effectually prevent the use of the titles pertaining to veterinary science by all persons unless they are graduates of some legally chartered or incorporated veterinary college or university; or who are willing to pass an examination before a Board of Examiners, in order to demonstrate the fact that they are competent to assume such title.

Two bills have been drafted upon the foregoing plan, which we respectfully submit for your consideration

We further recommend that this Association be incorporated under the laws of the State of Iowa, as a society having for its object the advancement of matters pertaining to veterinary science.

Articles of incorporation have been drawn up by the Committee, and the same are herewith submitted.

LOUIS A. THOMAS,

G. A. JOHNSON,

Committee on Legislation.

Dr. G. A. Johnson: I will say that one of the bills voices the ideas of the Western Iowa Association. I am in favor of endeavoring to secure the enactment of a desirable law, and these bills are presented as outlines intended to bring out your ideas in discussion.

The President: I am in favor of a bill which will protect the people from the pretensions of men who have never qualified properly for the practice of veterinary science; but it is an open question whether this is a fit time to make efforts to secure a veterinary law.

Dr. Gibson: I am in favor of the bill presented. I think that now is the accepted time. The stock raisers are with us and we can secure the desired legislation.

Dr. Inger: I move the adoption of the first bill as presented.

Seconded by Dr. Campbell.

President: Gentlemen, you have heard the motion. It is open for discussion. This is an important subject, and we want a full and free discussion by all.

Prof. Stalker: I would suggest that we do not act hastily in this matter. I have had some experience in efforts to secure legislative enactments, and I know it is very difficult to convince legislators that the promoters of a proposed law are not actuated by selfish motives and that the public good is properly considered. Now, I would suggest that we consult with some experienced legislator in the framing and perfecting a bill. He will have better notions than we as to what points will be unconstitutional or objectionable from a legislative point of view. If the bill be nearly right when it is submitted it will meet with less objections and obstacles, which kill so many bills in committee.

I would favor the appointment of the proposed examining board by the Governor instead of by this Association. The official relation of this Association with any clause of such a bill would be fatal to the bill. That feature of the bill proposed which allows any person to practice for pay is a strong one. The graduate does not need a law to prevent business competition when the competitor is restrained from holding out false claims as to his qualifications. If he fails under such conditions he should further qualify himself or find another vocation.

I am in favor of a judicious bill, but object to any bill which would legalize incompetents; they are more dangerous than non-legalized incompetents.

Mr. Wallace, editor of the *Iowa Homestead*, thought the proposed legislation was very reasonable and modest, and should enlist the co-operation of all the breeders' and stock-raisers' associations in the State, and secure the hearty endorsement of our stock and farm journals. He thought the *quack* should be relegated to his proper sphere and prevented from imposing upon a credulous public.

The Secretary: I would object to the passage of the motion. That feature of the bill which places the examination under the control of this Association is a bad one. It would smack very strong of class legislation, an idea very objectionable to the people of this country. I am in favor of leaving the appointment of the examining board with the State Executive, but think it best to provide that no more than two members of that board, if the number be confined to five, shall be graduates of any one veterinary school. Such a provision will prevent many possible disagreeable contentions for place on that board. I would also favor the compulsory examination of all applicants for a license to practice who come into the State after the enactment of the proposed law, whether the applicant possesses a diploma or not. We are aware that some men secure diplomas who are very incompetent in veterinary science, and many new veterinary schools are springing into existence, and some of them may prove to be diploma mills. You know that any qualified veterinarian could pass a reasonably satisfactory examination if he had ever been properly instructed, and such a provision would not tend to keep competent men from coming to our State, while it would keep out and prevent legalizing the incompetents.

I am heartily in favor of the clause prohibiting the payment of public funds for service rendered by non-legalized veterinary practitioners; also think that only legalized veterinarians should be competent to give expert veterinary testimony.

The President: I most heartily approve of the points raised by the Secretary, and I hope you will give them due consideration.

Dr. Edwards: I think we ought to pass some kind of a

law to restrain the quack from using any title used to distinguish a veterinary graduate from other men, and am in favor of trying now to secure the passage of such a law ; but if we attempt to legislate the quack out of his business, the effort will prove a dismal failure.

Dr. Campbell: I am in favor of the passage of a veterinary law and will do what I can to aid it. I agree with the Secretary that no one school should be given the majority in the examining board.

Hon. Horace Boise, Governor of the State, was here introduced, and the gist of our discussion on the proposed legislation was explained to him by Prof. Stalker. The Governor thought he saw nothing objectionable in such proposed enactment, and it might be of great value to the stock interests of the State ; however he would not commit himself to any such legislation until it came up for his executive consideration.

Dr. Ingar: It is quite evident that we are all in favor of making an effort to secure a desirable law, and I think we can do so if we go at it understandingly. I will withdraw my motion to adopt with the second's consent.

The motion was withdrawn.

On motion the report of the committee on legislation was accepted, and the committee discharged.

Moved by Secretary, seconded by Dr. Ovens, that we endeavor to secure the enactment of a judicious bill ; carried.

Moved by Dr. Norton, seconded by Dr. Miller, that a committee of three be appointed to draft a bill in conformity with the ideas expressed in this discussion, and urge its enactment by the next Legislature ; carried.

Moved by G. A. Johnson, that we incorporate as a scientific body. Seconded. Lost.

The Association adjourned to the banquet hall, where a delicious and attractive spread occupied the attention of all. Prof. M. Stalker presided as master of ceremonies, and many happy toasts and responses completed the pleasures of the banquet.

SECOND DAY.

MORNING SESSION.

Association called to order at 10 A. M. by President Thomas.

Roll-call elicited "present" from twenty members.

Dr. John McBirney presented a paper on "Alcoholic Solution of Mercuric Bichloride in the treatment of Fistulous Tracts." *

DISCUSSION.

Dr. Norton: It has been my opportunity to care for quite a number of cases of this character, and as you perhaps know they are usually old, bad cases which the country horse-doctor has tried a long time to cure, before they find their way to the college hospital. These cases were given constitutional treatment by liberal doses of sodium hyposulphite and always with decided advantage. I think these cases persist in a decidedly chronic course for lack of proper general medication.

Dr. Edwards: I am interested to know whether your observations correspond with mine. I have seen quite a number of poll-evils and fistulous withers which seemed to be a sequel of distemper, and my experience leads me to think these troubles are usually preceded by some debilitating condition. These cases all yielded to treatment.

Dr. Niles: Did you use constitutional treatment?

Dr. Edwards: I did not.

Dr. Derwent: I believe the best results are obtained by frequent dressing of diseased parts; it is more important than the special medicines used.

Dr. Ovens: I treat these cases quite differently. I use a caustic but once and then dress the diseased tracts only once a week. I think it a disadvantage to disturb a diseased tract every day.

Dr. M. E. Johnson though the best results are obtained by dressing the parts frequently.

Dr. G. A. Johnson: I find cases of this character do nicely

* Printed in this issue of the REVIEW.

if the sinuses are opened freely, thoroughly cleansed and then packed with cinchonidia sulphate. This substance seems to retard or prevent suppuration and stimulates to healthy granulations. The cavity should be cleansed at the end of five to seven days after the first packing, then repacked if not found in a satisfactory condition, after which use the ordinary antiseptic dressing once or twice a week.

The President: I am treating these cases now by freely opening at the cavities, and irrigating constantly during the day time, for a period of three to five days, using a solution of permanganate of potash for this purpose. Then I dry the cavities and fill them with a mixture of iodoform in cosmoline, applied every three to five days. The results from this line of treatment have been the most satisfactory that I have tried.

Dr. Brown: I have made use of many agents, including mercury bichloride and hydrogen peroxide up to one year ago. Since then I have been using the actual cautery. I destroy the pyogenic membranes with the hot iron, then use the ordinary dressings.

The Secretary: The stage or condition in which the practitioner finds these cases must be taken into consideration when treatment is undertaken. I have seen cases before a pyogenic membrane was formed, simply a tumefaction, which if undisturbed develops into full-fledged fistulous withers, or consisted of a collection of amber-colored fluid with a quantity of ligamentous tissue floating in it, which seemed a simple affair when first opened, but soon it is discovered that a large amount of ligament is diseased, and that considerable time will be required for the healthy portion to cast off the diseased or necrosed portion. In the first condition mentioned, I have seen many cases recover after a simple incision through the entire tumefaction, which is usually of a fibro-cartilaginous consistency, followed by simple dressings. The second condition has demanded surgical interference several times before all the necrosed ligament can be removed, and which recover under the use of antiseptic dressings. In old standing cases I am in the habit of using what is known as corrosive liniment, which consists of mercury bichloride, one ounce; camphor,

one ounce ; turpentine, sixteen ounces, injected into the sinuses once a week.

Dr. Morse : I have seen several cases where the materies morbi has been transmitted to other parts by means of the lymphatic vessels, as for instance, a fistula of the withers would follow a poll-evil in the same animal, and the lymphatics between these parts be enlarged and inflamed. I am inclined to the notion that constitutional treatment is indicated in these cases.

Dr. J. H. P. Edwards read a paper on "Pneumonitis" * which gave rise to the following

DISCUSSION.

The President : Dr. Edwards is to be congratulated upon his paper. Many points of interest are brought out which merit discussion. As to the treatment of pneumonia I am satisfied that nursing is the most important part of it. I think that aconite is contra indicated, as it weakens the heart. Many cases die after the crisis owing to thrombi, which are formed because of a weakened heart. Belladonna serves me better. In the first stages of cases brought to my hospital I put them in a steam-room and give them a steam bath, then clothe very warm. I object to the laxative drugs, but favor a nutritious diet.

Dr. Morse : Does the stall in which a pneumonic patient dies become a source of infection? I have seen cases develop in horses which have been put into such a stall.

Dr. Niles : I have heard of several such cases but have seen none. I do not think pneumonia is dependent on exposure to cold. The disease is much more frequent in the Southern States than in this climate, and often developed without marked changes of atmospheric temperature. I think the disease is infectious. It is due to the activity of micro-organism. I think use of aconite is indicated in this disease by a strong pulse, and should be given in doses of thirty minims and its action should be carefully watched. This drug lessens the rate and force of the pulse and respiration.

* Printed in this issue.

Dr. Morse: I would like to know if mustard or other counter-irritants are useful when applied to the sides?

Dr. Edwards: I doubt their utility.

Dr. Miller: I find aconite and mustard useful in the first stages only.

Dr. Platt: I do not think exposure to cold is necessary to the development of pneumonia. I have seen cases develop in harvest time. I believe it depends on a contagion. I treat these cases in the first stage by covering with blankets wrung out of hot water, which are again covered with dry ones, the wet blankets to be reheated as required. Some cases recover under this treatment.

Dr. G. A. Johnson: Cases of pneumonia caused by the presence of medicine in the lungs always die for me; and cases complicating or following influenza are nearly always fatal. In ordinary cases I use the following mixture: \mathfrak{z} i fl. ex. aconite, \mathfrak{z} i fl. ex. belladonna, \mathfrak{z} 2 alcohol; give 13 at frequent intervals upon the tongue until the heart is controlled. I favor the use of heat applied to the chest walls and use sacks of heated salt.

Dr. Campbell: Since Dr. Morse asked the question, I remember of several instances where cases of pneumonia developed soon after the horse was put into a stall previously occupied by a horse sick with pneumonia. I am satisfied a stall will retain the infecting agents of this disease, and such stalls should be thoroughly purified before being used again.

The Secretary: I am very much interested in Dr. Edwards' paper, and the discussion which you have given it. You do not seem to dwell much on the symptoms, and are nearly agreed as to cause, and like myself are more interested in the treatment. My first experience in the treatment of pneumonia was very unsatisfactory. I lost all my cases. I thought the bounding pulse and hurried respiration indicated a sedative, and I used aconite in frequently repeated doses, which subdued the heart's action, but when the crisis came my patient's strength faded away, and death resulted.

Experience taught me that the throbbing heart and labored respiration were nature's effort to overcome the disease, and

if nature could be assisted a little it might succeed. To do this I now employ a diffusible stimulant, liquor ammon. acetatis (freshly prepared) in doses of four to six ounces, repeated as often as required, usually two to four hours; and to control the high temperature I combine with the first one or two doses of stimulants fl. ex. jaborandi $\frac{3}{4}$ i and acetanilid or antifebrin $\frac{3}{4}$ i; clothe the horse in warm blankets; take away all provender, but provide a bucket of water in which is dissolved an ounce of potassa nitrate. The drugs are administered as a drench in a pint of water. The above medication given in the first stages of this disease will produce copious sweating and a decided fall of temperature, which will eventuate into rapid convalescence in two or three days; of course the stimulant is continued at increasing intervals, and food is withheld until the third day. Nearly all cases of pneumonia secured in the first stage will yield rapidly to this treatment in this climate. Cases in the second and third stages I treat with stimulants and nutritious diet, with a fair percentage of recoveries. I find it is all-important to carefully determine what and how much food the attendant shall give, for an overfeeding often secures a fatal termination.

The details of several cases were here read from the Secretary's book of notes, which stimulated a spirited discussion concerning the first symptoms of pneumonia.

Dr. S. Whitbeck read a paper entitled, "A Study of the Microbes of Pus,"* which elicited the following

DISCUSSION.

Dr. M. E. Johnson: What agent do you find the most practical for the destruction of these pyogenic germs?

Dr. Beckwith: As a practical application I would recommend a one per cent. solution of hydro-naphthol.

Dr. Norton: Peroxide of hydrogen should not be diluted for use in this class of cases. I think this paper is a start in the right direction. We should encourage experimental work. There is much to be discovered before our professional knowledge is perfected.

* Will appear in the next issue.

Dr. Beckwith: It is important that fistulæ or wounds which have been cleansed with peroxide of hydrogen should be immediately protected from the air by proper covering.

The President: I am glad to know that our younger members have had the opportunity to acquire the technique of experimental investigation. They can do a part toward clearing up many problems which confront the practitioner.

Prof. Stalker: The experiment station in connection with the Iowa Agricultural College is established for the express purpose of making investigations in the interest of agriculture. Among other things it is prepared to investigate diseases of animals, or when notified of the occurrence in any section of the State of the outbreak of epizootic disease, an officer of the station will be sent to make investigations into the cause and prevention. If any member finds pathological tissues as to the condition of which he does not feel satisfied, send them Prof. Niles and he will be pleased to examine them and inform you of his findings.

The Secretary: This is surely a valuable opportunity, and I intend to avail myself of your generous invitation, and I would enquire of Prof Niles for instructions relative to the best method to prepare and transmit specimens.

Prof. Niles: Solid tissues should be cut into small cubes, one-half to one inch dimensions, removed by sterilized instruments from the substance of the tissue after the surface has been removed or sterilized by a flame or hot iron. Instruments are readily sterilized by a flame. The specimen can most readily be sent by mail in a twenty-five per cent. solution of alcohol, sealed up in a tin can. A tinsmith can readily seal tin cans with solder. If specimens are immediately wrapped in antiseptic gauze they are fairly well protected. Liquids should be sealed in sterilized glass tubes, packed with cotton in a box, which will insure safe transmission through the mail. Do not send whole organs, such as lungs, liver, etc., by express, for the chances are that they will have become putrid and useless before delivery.

The following report of interesting cases then took place:

REPORTS OF INTERESTING CASES.

President: I saw within the past two months a case of hydrocephalus in a colt, the circumference of its head being thirty-seven inches. I removed the fifth leg of a young colt at its junction with the body. The wound healed satisfactorily under antiseptic dressings.

Dr. Morse: I have divided the posterior tibial nerve in twenty cases for spavin and hock lameness and at first I thought I should be able to report to you a perfectly successful operation for hock lameness. Nearly all of them go straight and smooth immediately after this operation, and some continue to do so now; but many of them go lame again after a hard drive, and upon examination I find the divided nerves are grown together again even in cases where a half inch or more of the nerve had been resected.

In the operation of neurotomy for the relief of navicular lameness I find the same difficulty, and propose to stitch the distal portion of the divided nerve into the wound so that it cannot unite with the approximal portion, and I will report the results to you next year.

I would like to know what you are doing in cases of bog spavins and thoroughpin. I have been aspirating the excessive fluid from the articular sack, and then injecting into the cavity a solution of iodine. The iodine sets up a lively inflammation which causes the animal intense pain; it will become very restless, tuck up in the flanks, and even become wet with perspiration; the inflamed limb will be held from the ground. The pain will subside in a few hours, the toe will come to the ground in two or three days, and the animal is turned to pasture for three or four months, when recovery will have been completed.

Dr. Thomas: I am treating this class of cases by an elastic bandage made to lace on the parts, and I think the results are very satisfactory. The bandage is made on the same principle as the elastic stocking and adapts itself to the parts very nicely; compressers are applied over the sacculated points.

Dr. M. E. Johnson: I wish to inquire what preparation and strength of iodine Dr. Morse uses.

Dr. Morse: Any solution may be used. I employ the common tincture of the shops and inject a drachm or more.

Dr. Stewart: I have injected tincture of iodine into the cavity of bog spavin after evacuating the accumulated fluid, and a satisfactory result has been the issue in four or five months. I think we are too timid in this class of cases. I do not know of a fatal result following this method of treatment.

Dr. Edwards: The firing method has been successful in my hands. I puncture the enlargement at several points with the red-hot cautery point, the serum escapes, and the inflammation which follows results in a cure.

Dr. Miller: What do you do with bursal enlargements at the fetlocks? Will injections of iodine cure them?

Dr. Morse: I open them freely with a scalpel and let them heal by granulation. I find it a very safe and satisfactory way to treat them. I mean what is known as windgalls or bursal enlargements.

The Secretary exhibited a book of notes, which attracted general attention on account of the form of note sheets used and the binder used to secure their preservation. The note-sheets are issued by the printer in tablets of 100, and when used are immediately put into an adjustable binder and indexed both for disease and owner of patient. He claimed for his notes convenience, completeness, durability and ready reference, and said the keeping of such notes made the practitioner more careful to secure the minute details of symptoms and history of his cases, more careful in diagnosis and more definite in the use of therapeutic agents.

The following officers were elected: President, M. E. Johnson; First Vice-President, F. H. P. Edwards; Second Vice-President, J. E. Brown; Secretary-Treasurer, S. Stewart; Censors, H. Ovens, J. H. Platt, A. B. Morse.

President Johnson was duly installed, and appointed the following committees:

Committee on Legislation: L. A. Thomas, M. Stalker, J. E. Brown.

Committee on Collective Statistics: F. H. P. Edwards, J. D. Inger, J. Miller.

Resolutions of respect to the memory of Dr. A. E. Bosquet were adopted.

On motion, a vote of thanks was tendered the proprietors of the Savery House for the use of its parlors, also a vote of thanks to Drs. Morse and Howell for interesting clinics.

Adjourned, to meet in Marshalltown during the autumn of 1892, the time to be fixed by the President.

S. STEWART, *Secretary*.

ONTARIO VETERINARY ASSOCIATION.

The annual meeting of this Association was held in the Ontario Veterinary College, Toronto, on Dec. 23d, 1891.

The President, Mr. Gible, of St. Mary's, Ont., in his opening address gave some good advice; he also strongly advocated the advantages of periodical meetings of the profession for the purposes of discussion and mutual improvement.

Messrs. Robson, Kidd and Sisson were duly proposed and elected members of the Association.

On motion by Mr. Lloyd, seconded by Prof. Smith, Principal of the Ontario Veterinary College, Prof. Law, of Cornell, who was present, was unanimously elected an honorary member.

Mr. John Wende read an interesting paper on some cases of the accidental poisoning of horses by castor oil bean mixed in the food, which had occurred in the course of his practice.

Mr. Cowan gave an address on hog cholera, of which he has had considerable experience. He mentioned the difficulties frequently occurring in diagnosis, without a post-mortem examination, the temperature and pulse for various reasons being unreliable guides, also the skin-lesions—blue, red or purple patches may or may not be seen. He mentioned the hæmorrhagic lung and ulcerations of the intestines as diagnostic, the ulcerations usually occurring in the glands in the neighborhood of the ilio-cæcal valve.

Prof. Law also gave some very interesting information in relation to the disease.

Mr. Mole spoke of the tenderness of the skin to the touch which he had observed in Ireland. Mr. Cowan had not noticed this condition in Canada. Prof. Law mentioned that symptom as a peculiarity of the disease in Great Britain.

A discussion on changing the date of the annual meeting then took place. It was ultimately decided that instead of doing so this year, a meeting of the Association should be held in June, 1892, in the city of London, Ontario.

The following officers were duly elected for the ensuing year: Mr. MacArthur, President; Mr. John Wende, First Vice-President; Mr. W. H. Burns, Second Vice-President; Mr. C. H. Sweetapple, Secretary; Mr. W. Cowan, Treasurer.

Messrs. Hand, W. J. Wilson, Steele, Gallanough, Hopkins, Quinn, Kidd and Weddefield, Directors; Messrs. Elliott and O'Neil, Auditors; Messrs. Wilson and O'Neil, Delegates to West-Fair Association; Mr. W. Cowan, Representative to Central Farmers' Institute.

Messrs. Wende, Cowan and Gibb were appointed to read papers at the meeting to be held in London, in June.

C. H. SWEETAPPLE,

Secretary and Registrar.

UNITED STATES VETERINARY MEDICAL ASSOCIATION COMITA
MINORA.

A meeting of the Comita Minora of the United States Veterinary Medical Association will be held at "The Arena," 41 West 31st Street, New York, on Saturday, February 20th, 1892, 8 P.M.

Arrangements for the International Veterinary Congress at Chicago, 1893, and the place of meeting of the Association for 1892, will be considered, in addition to matters of routine business.

Suggestions and communications to be for the Comitia Minora should be submitted to the Secretary.

By order of the President,

R. S. HUIDEKOPER.

W. H. HOSKINS, *Secretary,*

12 South 37th Street, Philadelphia.

ALLUMNI ASSOCIATION OF THE AMERICAN VETERINARY
COLLEGE.

Members of the Alumni Association of the American Veterinary College, who expect to attend the Annual Banquet, which will take place on the evening of March 24th, 1892, will please notify the Secretary of the Association, in order that he may determine how many covers it will be necessary to provide for.

Notice of place and hour will appear in the next number of the REVIEW.

E. B. ACKERMAN, D.V.S., *Sec'y*,
141 West 54th Street, N. Y. City.

CORRESPONDENCE.

LIVE AND LET LIVE.

Mr. Editor:

Your correspondent's inquiry—Are employees of the Bureau of Animal Industry allowed to engage in private practice?—surely interested a great many readers of the December number of the REVIEW. I am practicing in a locality where anything in the shape of private practice by the Bureau's representative would be satisfactory, but there is no *privacy* or *delicacy* about it; the humble, hard-working D.V.S. is assailed on every side with such titles as United States Veterinary Inspector, United States Veterinarian, State Inspector Veterinarian, United States Inspector of Veterinarians; and Veterinarian to the President of the United States, I expect, will come next. Now this sort of brass-band parading of titles by political charges will never harm any intelligent practitioner as a rule, but there are, perhaps, numerous instances where a veterinarian of education and professional ability represents the Bureau, and if he is disposed to work the public with the above titles, then beware, Non Nobis Solum, for one is then in danger of being snowed under. Does the Bureau permit it, you ask? Yes, apparently;

and why not? Surely the Government is endeavoring to "protect the hog."

Respectfully,

IMPRIMATUR.

REMOVAL.

Our readers will note change of address of the Drevet Manufacturing Company, in whose laboratory the preparations of Charles Marchand are manufactured, from No. 10 West Fourth Street to 28 Prince Street, New York City. The removal will be made on the 15th inst.

PRACTICE FOR SALE.

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